

MAESTRO
DATA ORCHESTRATION

Maestro Basic Introduction

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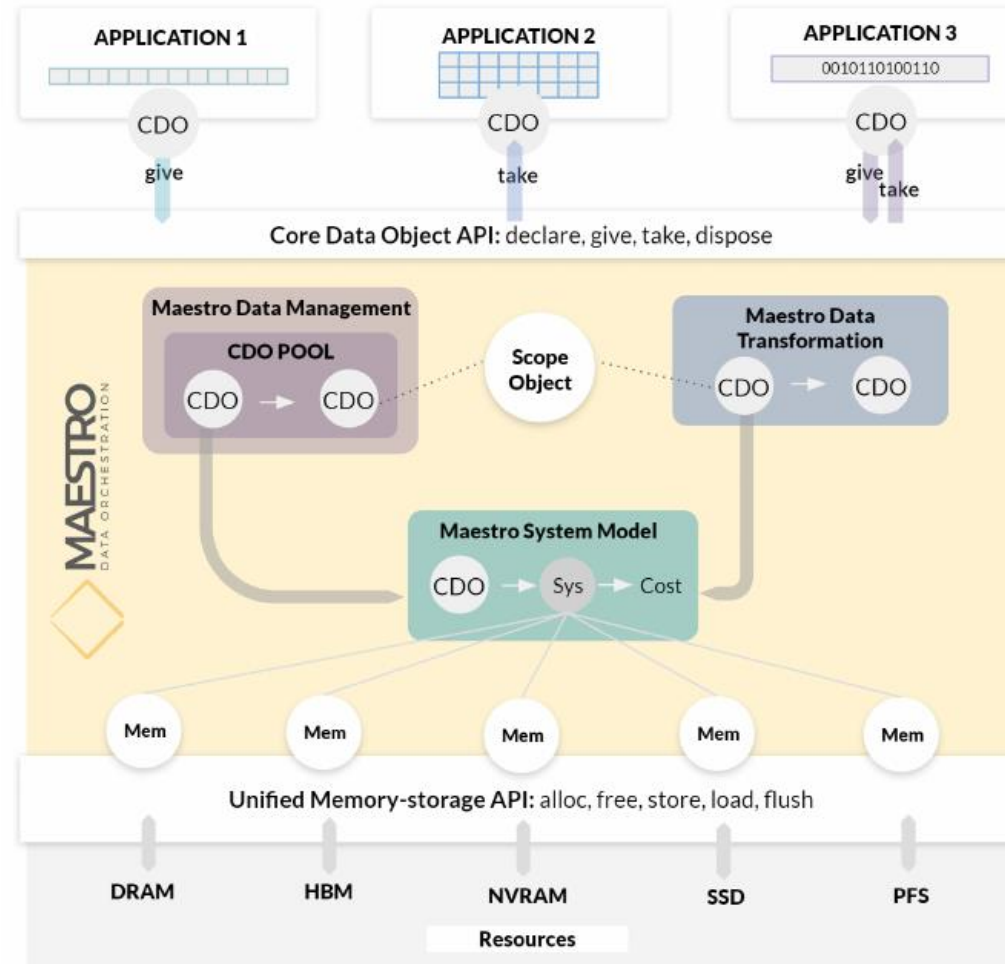
5th Nov 2021

Motr Interfaces Workshop

Summary

- Maestro will build a **data** and **memory-aware middleware** framework that addresses the ubiquitous problems of data movement in complex memory hierarchies that exist at multiple levels of the HPC software stack.
- **DATA AWARENESS:** Moving data through memory has not always been a performance bottleneck – but **Software stack lacks basic data handling functionality**
- **MEMORY AWARENESS:** Software rightfully insulates users from hardware details, particularly as we move up the software stack. But HPC **applications, programming environments and system software cannot make key data movement decisions** without some understanding of the hardware, particularly of the increasingly complex memory hierarchy.

Concept of CDOs



The Maestro Stack – MIO, Motr API & Motr

