

EXASCALE-READY CROSS-DOMAIN WORKFLOWS EXECUTION: THE ACROSS APPROACH

Motivations & Challenges

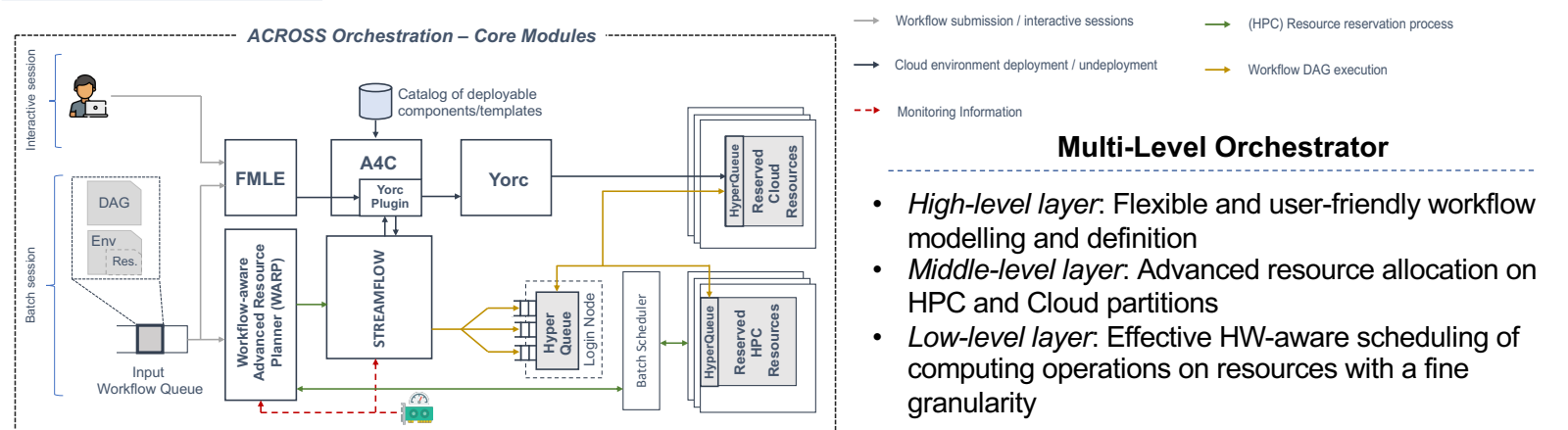
- Convergence among ML/DL, Big-Data and HPC simulations, matching the upcoming HW heterogeneity of supercomputers
- Improve capabilities of current generation of batch schedulers to be heterogeneous HW- and workflow-aware

Objectives

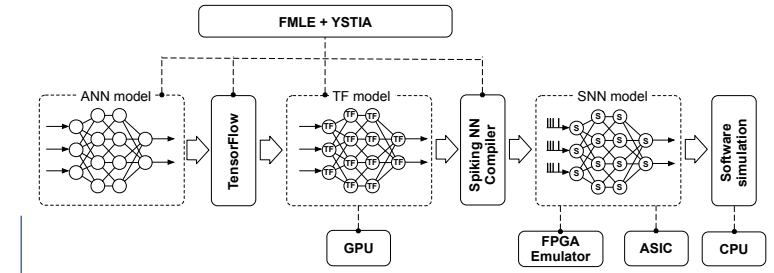
Project objectives grouped in three main categories (Overall Platform, Technology-focused, Pilot-specific) focusing on:

- Overall energy efficiency of the execution platform
- Improving pilot application workflows execution
- Exploiting innovative HW solutions like neuromorphic architectures and Spiking Neural Networks (SNNs)

Co-Designed Orchestration Solution



Heterogeneity



Consortium



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Demonstration through Pilot Use Cases

