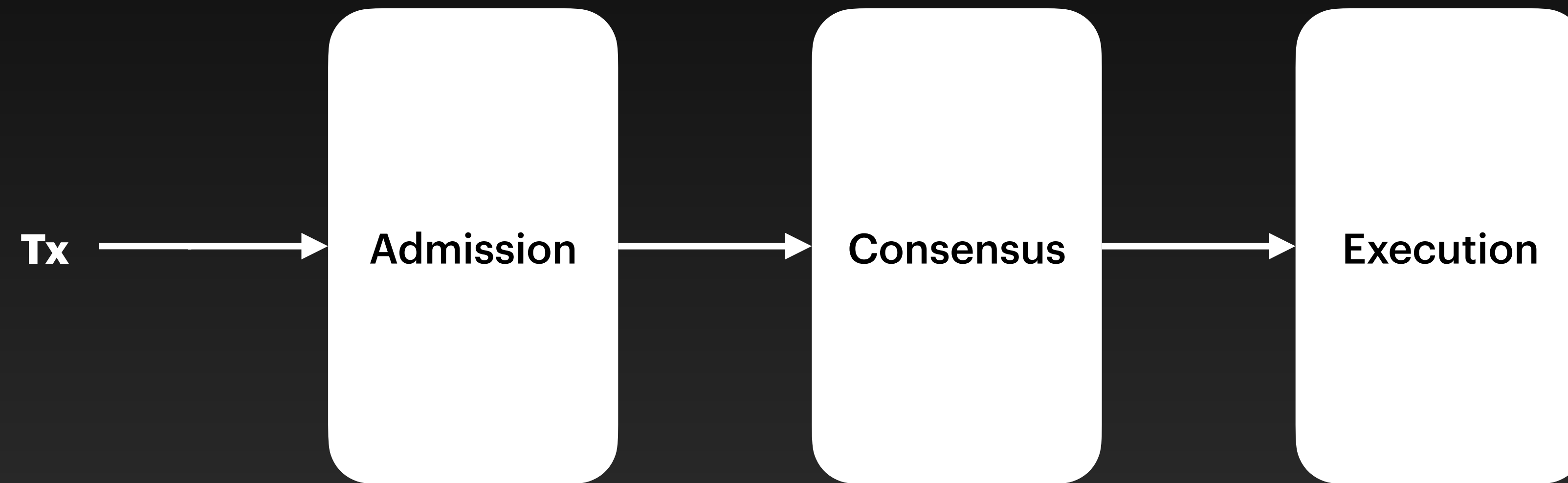


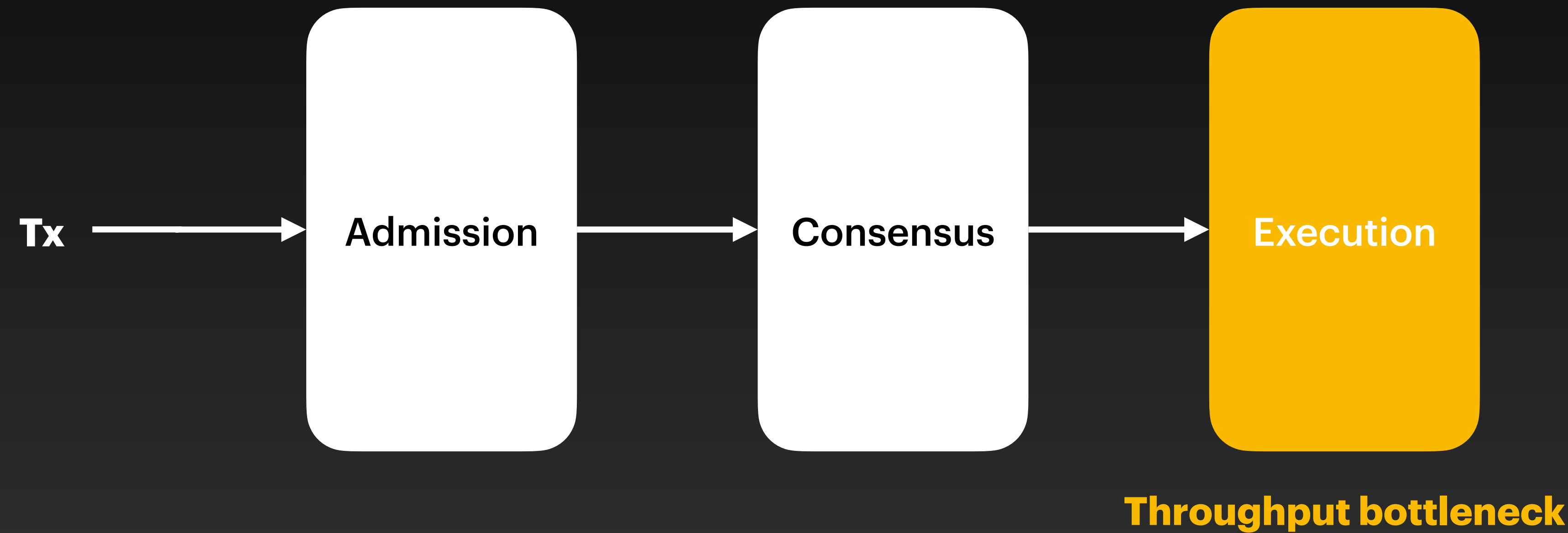
Remora

Elastic Asynchronous Distributed Execution

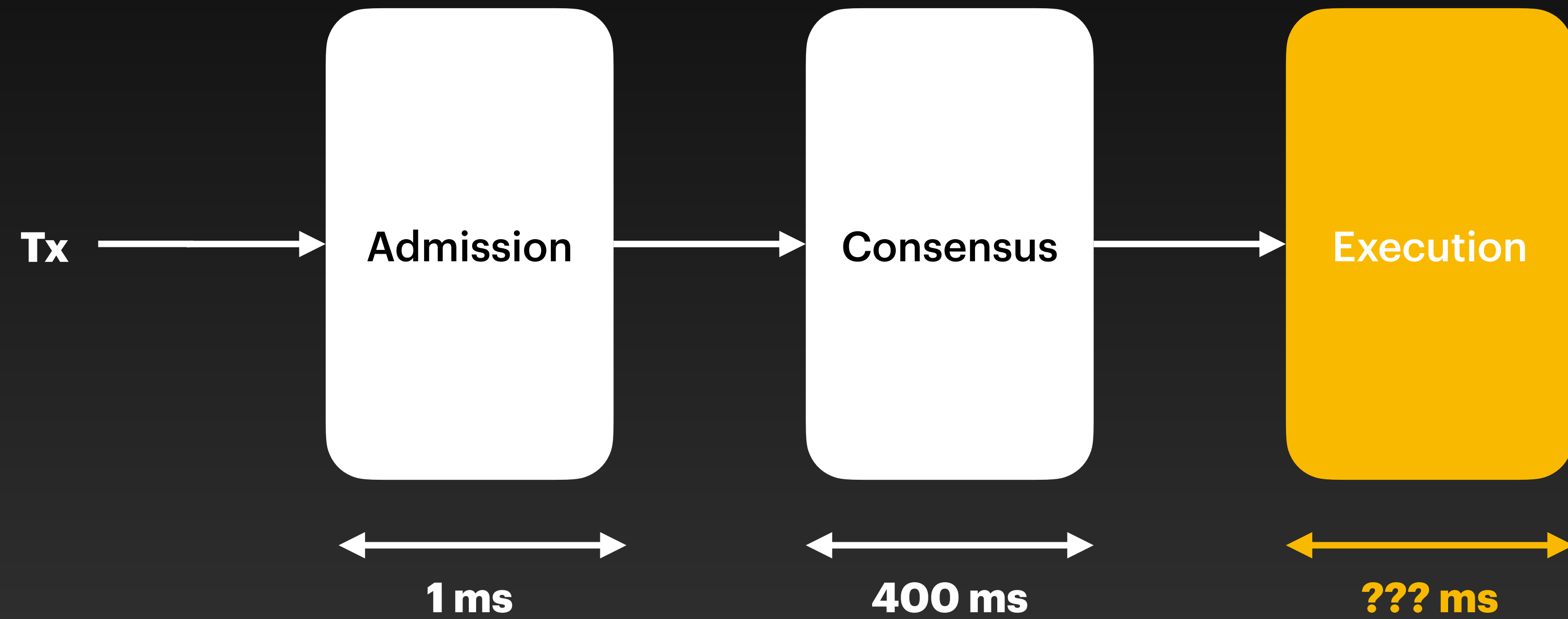
Current State



Current State

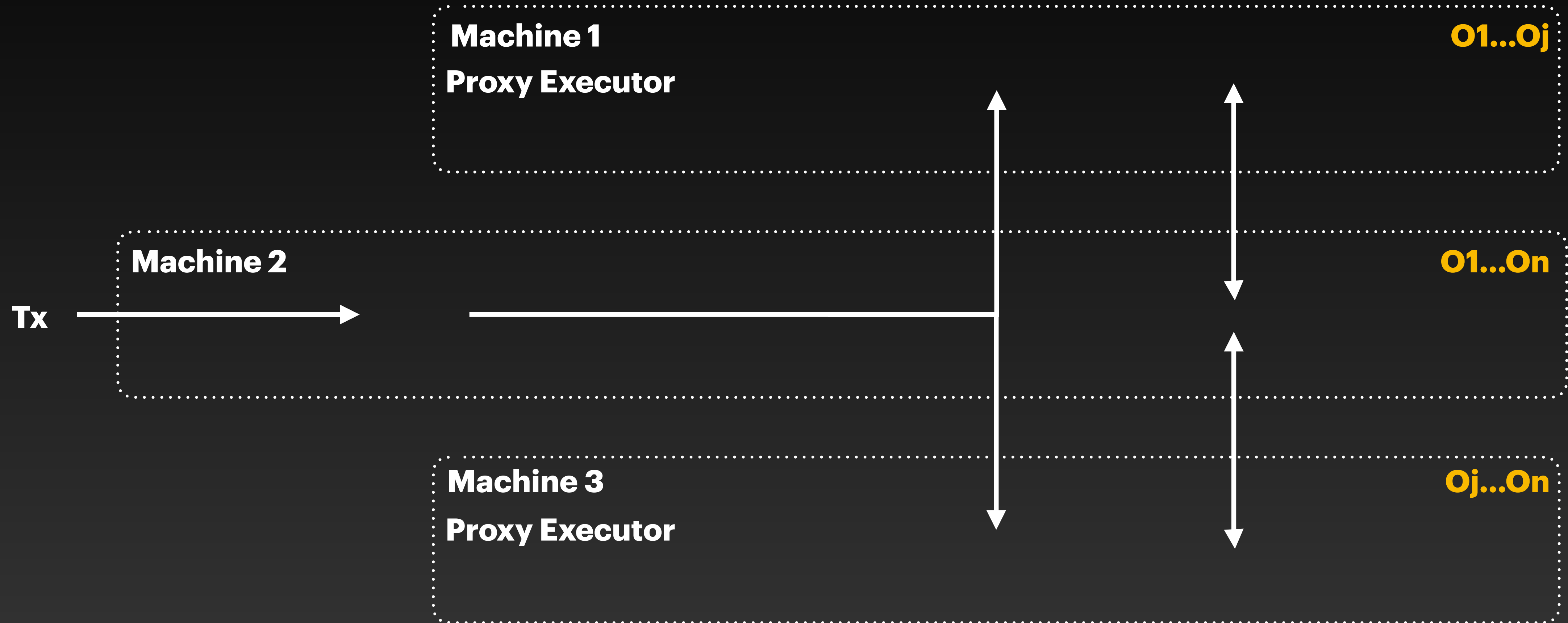


Current State

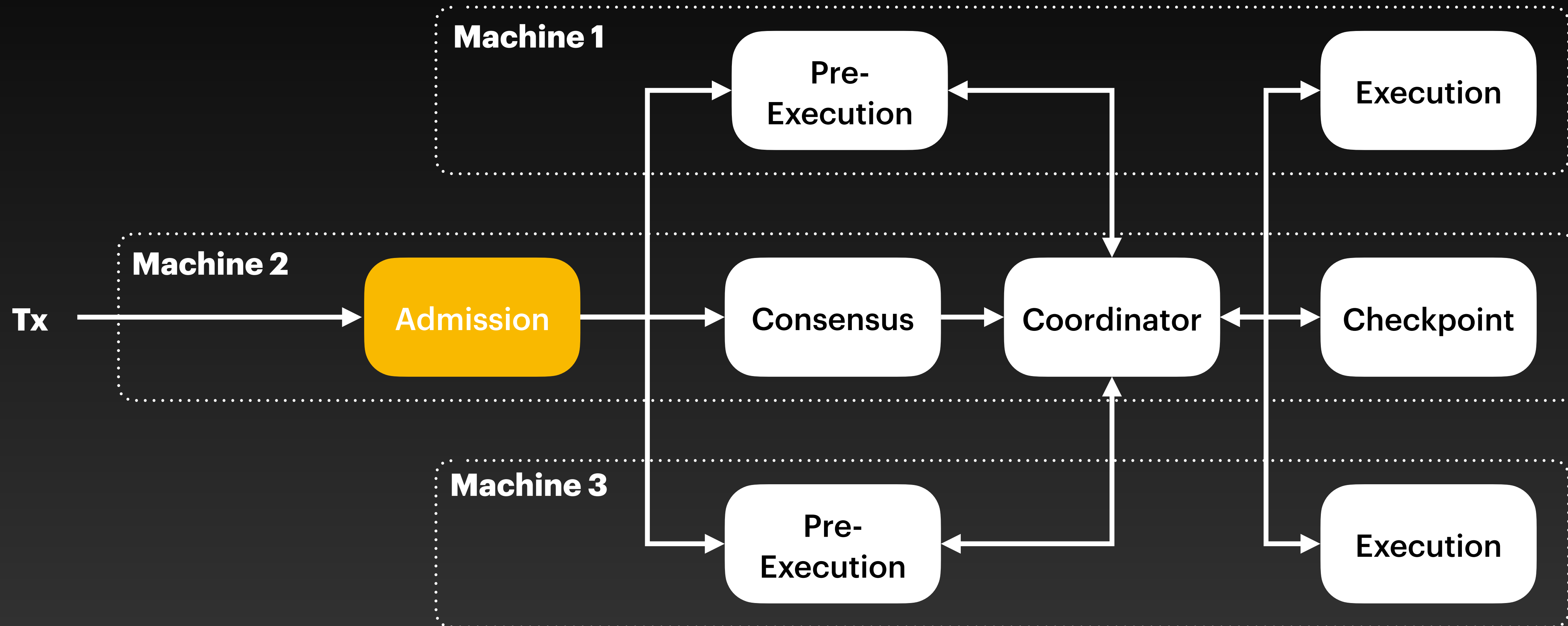


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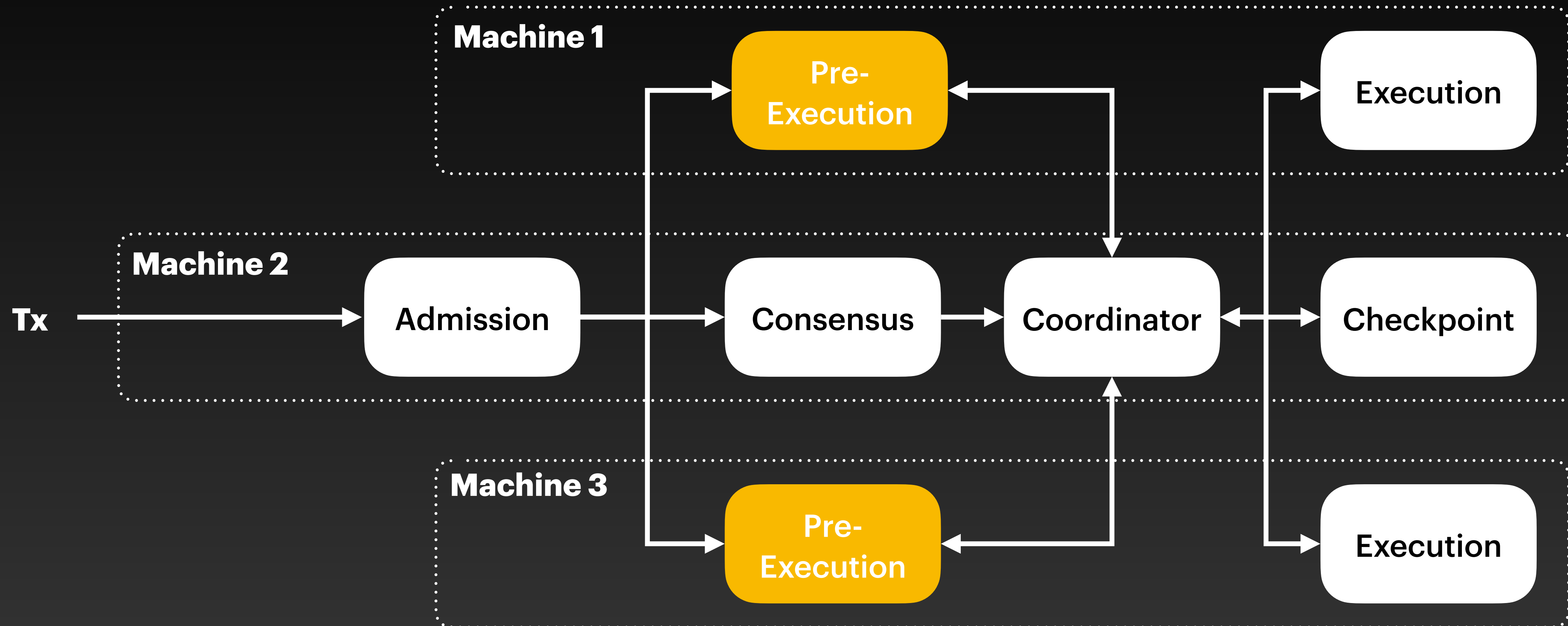
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Remora



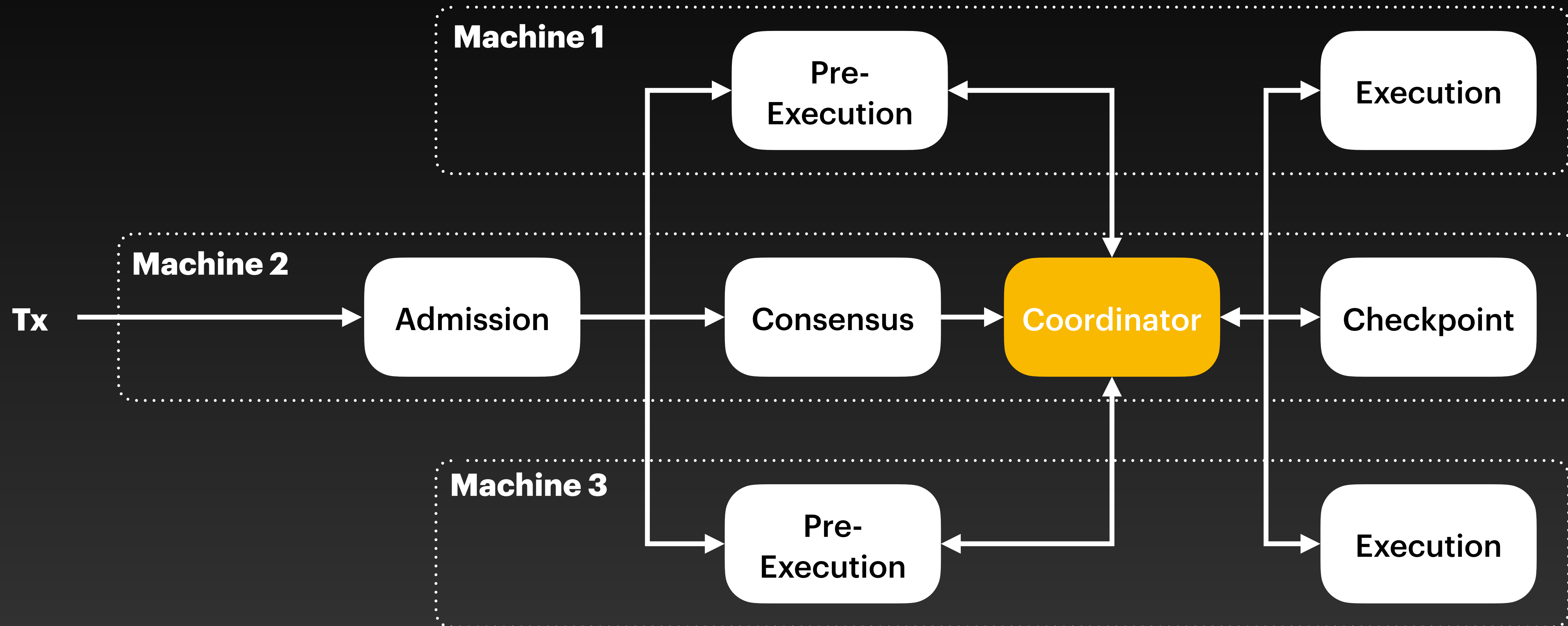
Remora



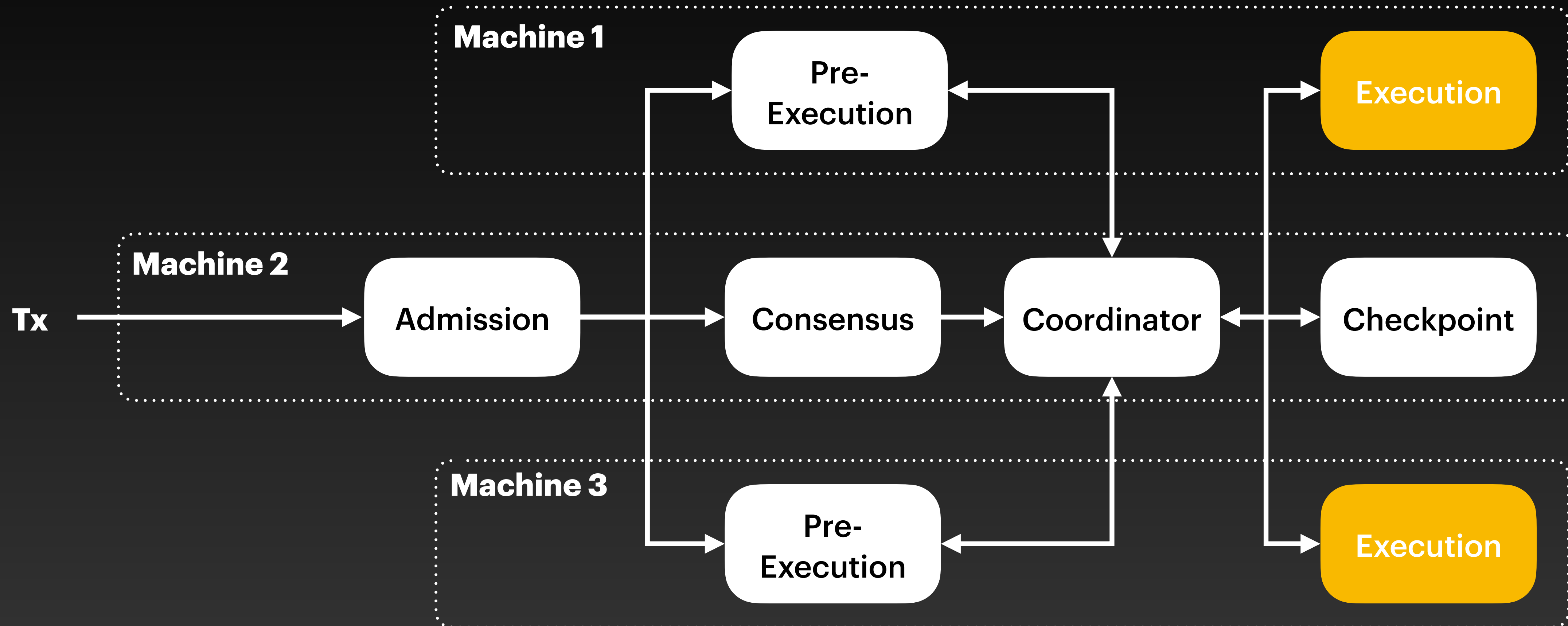
Pre-Executors

- Execute transactions
- Compute lookup table with:
 - Calls to pre-compiled functions
 - Status of cryptographic checks
 - Id of dynamic objects
- Forward results and table to coordinator
- Lazy update objects state

Remora



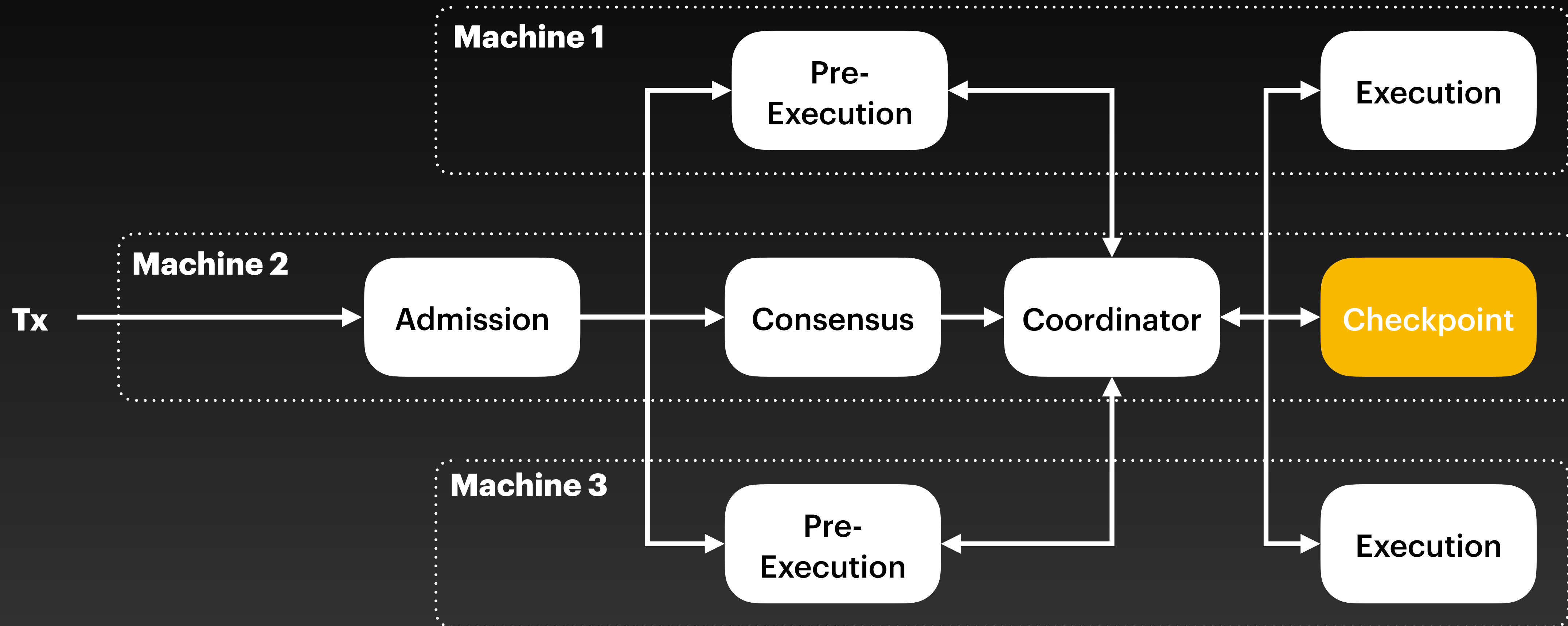
Remora



Merge Operation

- Adopt pre-execution if lookup table contains versioned inputs
- Skip authenticators verified by pre-executors
- Read from lookup table all dynamic objects
- Adopt from lookup table results to pre-compiled functions if in lookup table

Remora



State Update

- Primary executor keeps stats of pre-execution misses
- Push state update when misses exceed a threshold
- Hold state snapshot for crash-recovery