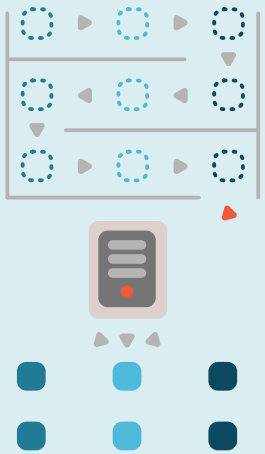
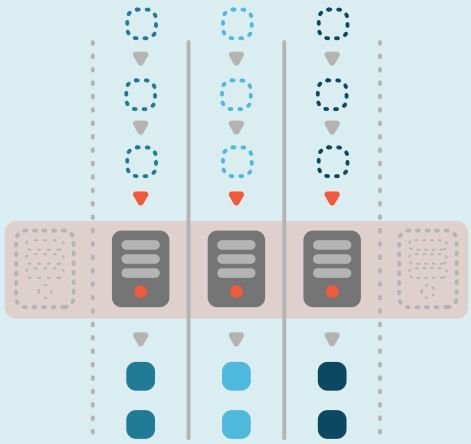
SLOPE

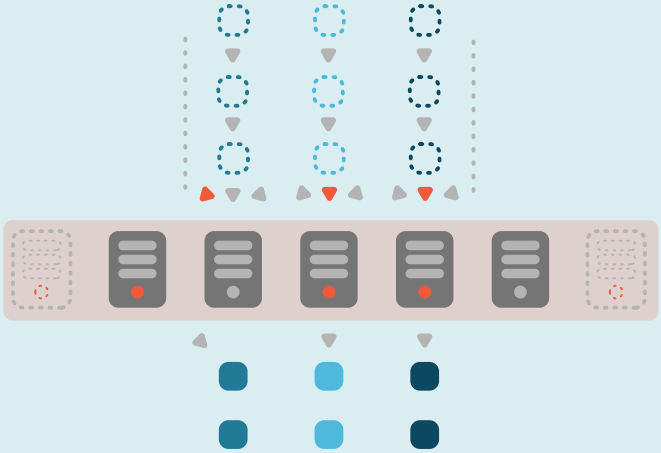
# HIGH PERFORMANCE MODE



## ON PREMISE



## TRADITIONAL CLOUD

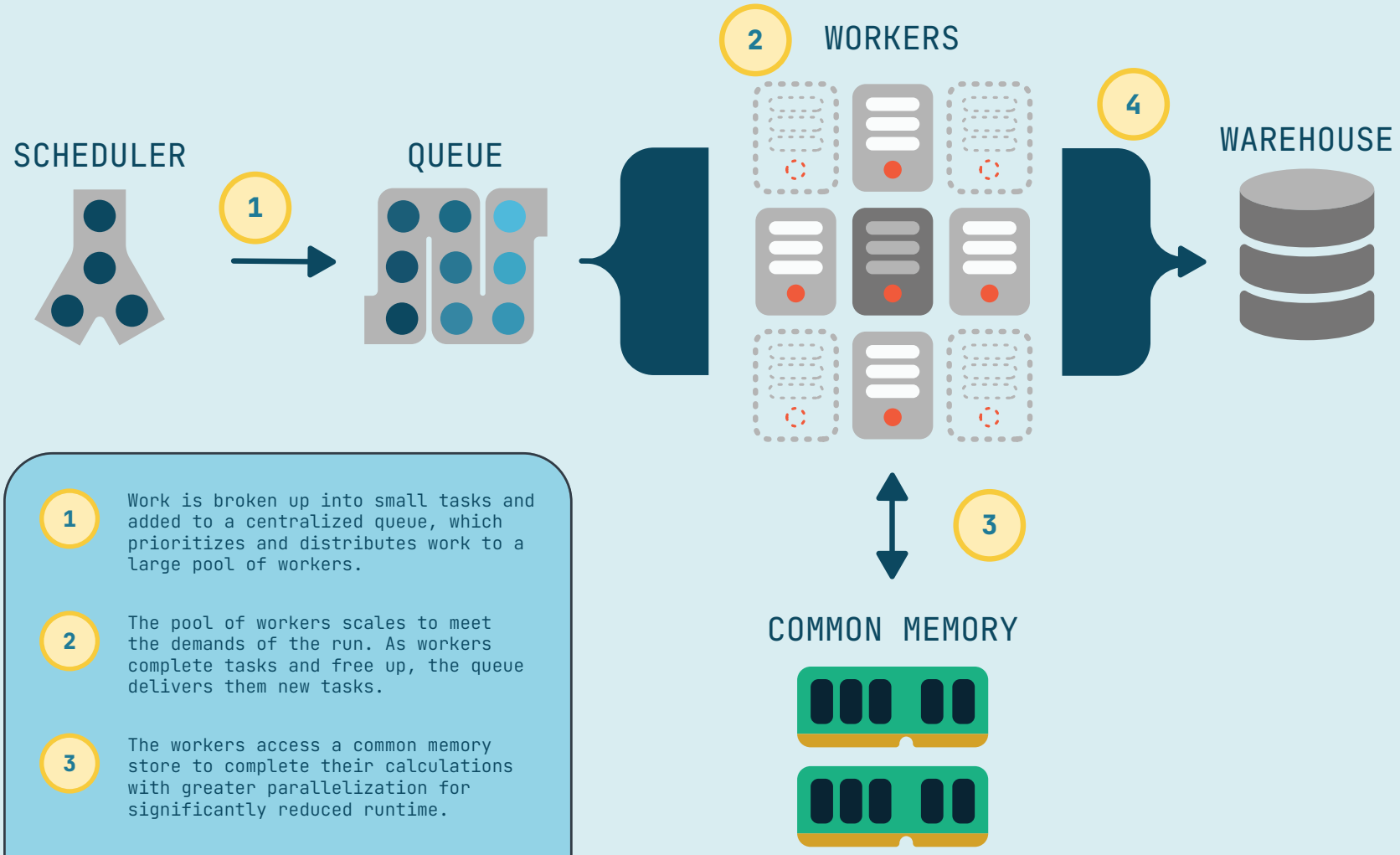


## HIGH PERFORMANCE

| | ON PREMISE | TRADITIONAL CLOUD | HIGH PERFORMANCE |
|---|---|---|---|
| RESOURCES | **Limited**; only machines purchased & maintained on premises | **Partially unlimited**; workload creates an upper limit of machines to be spun up | **Unlimited**; resources aren't constrained by workload and can dynamically scale to meet demand |
| ALLOCATION | **Manual**; select which machines are running which data | **Semi-automatic**; select number of cores per machine based on expected needs | **Fully automatic** |
| PARALLELIZATION | **Limited**; machines have finite memory to complete their calculations | **Limited**; machines have finite memory to complete their calculations | **Unlimited**; machines can access common memory with enormous parallelization potential |
| RUNTIME | **Slow** | **Faster** | **Fastest** |

SLOPE

# HIGH PERFORMANCE MODE




1. Work is broken up into small tasks and added to a centralized queue, which prioritizes and distributes work to a large pool of workers.
2. The pool of workers scales to meet the demands of the run. As workers complete tasks and free up, the queue delivers them new tasks.
3. The workers access a common memory store to complete their calculations with greater parallelization for significantly reduced runtime.
4. Results aggregate up from the lowest level and are then written to the reporting database for immediate consumption in the Analyze module.