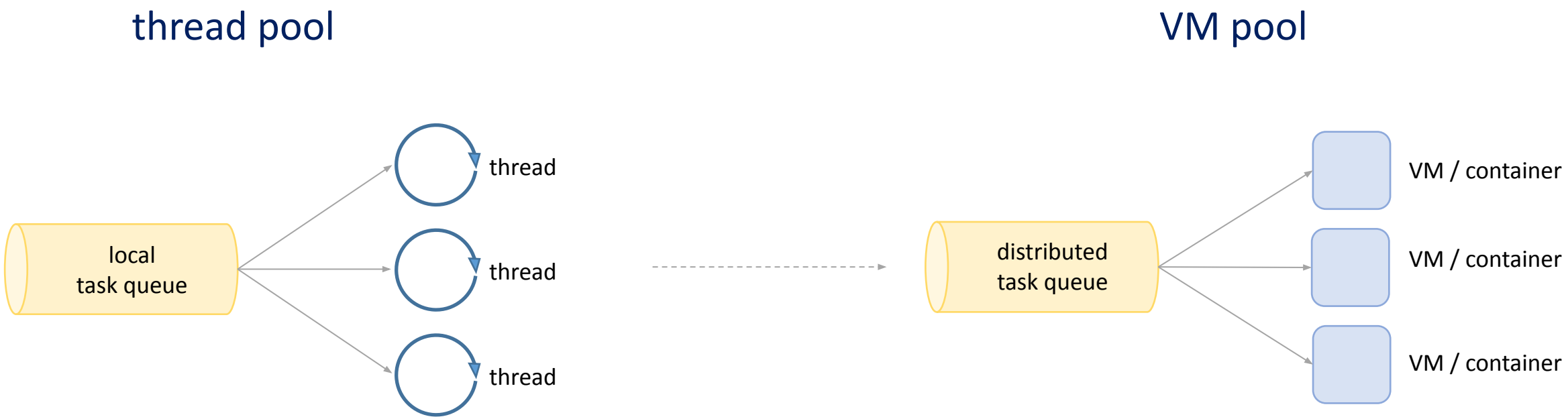
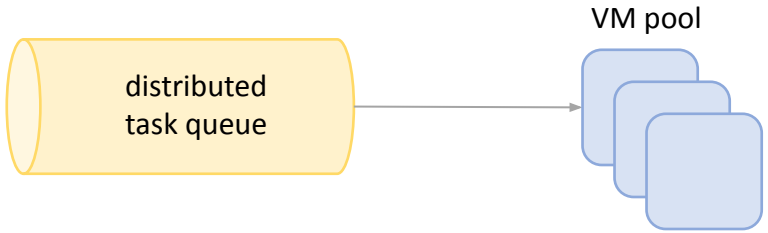
Big compute architecture



Big compute architecture

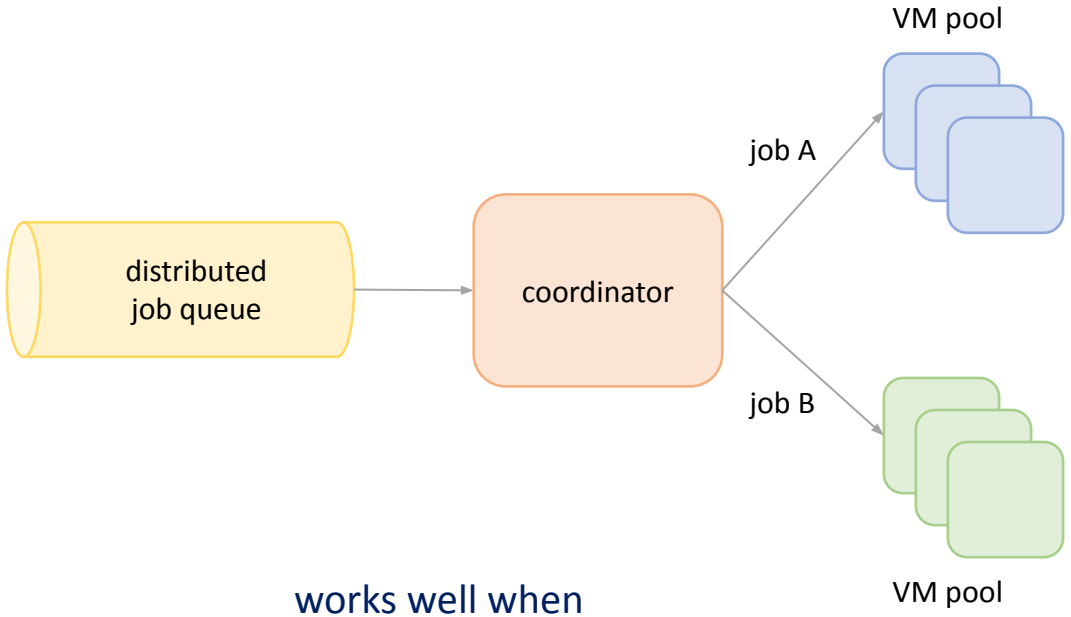
competing consumers



works well when

- tasks are homogeneous
- tasks arrive at more or less the same rate (e.g. stream of tasks)
- tasks are independent
- tasks take relatively little time to complete (e.g. minutes)

batch computing



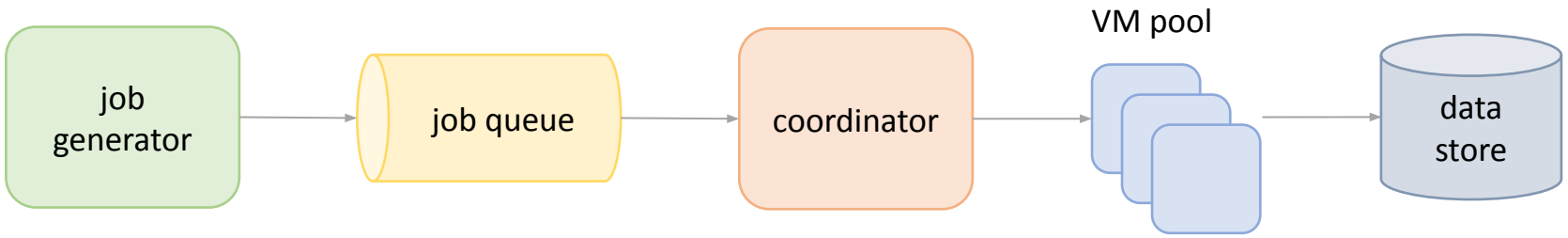
works well when

- tasks are heterogeneous
- tasks represent batch jobs
- tasks are tightly coupled
- tasks take a long time to run (e.g. hours)

Big compute architecture

big compute

high performance computing (HPC)



works well for applications that

- analyze large volumes of data (e.g. trading transactions, clickstream events, application log files)
- build thousands of machine learning models (e.g. personalized home pages for customers)
- perform computationally intensive operations (e.g. weather forecasting, climate simulation, drug discovery, analysis of a genomic sequence)