Unification of Temporary Storage in the NodeKernel Architecture

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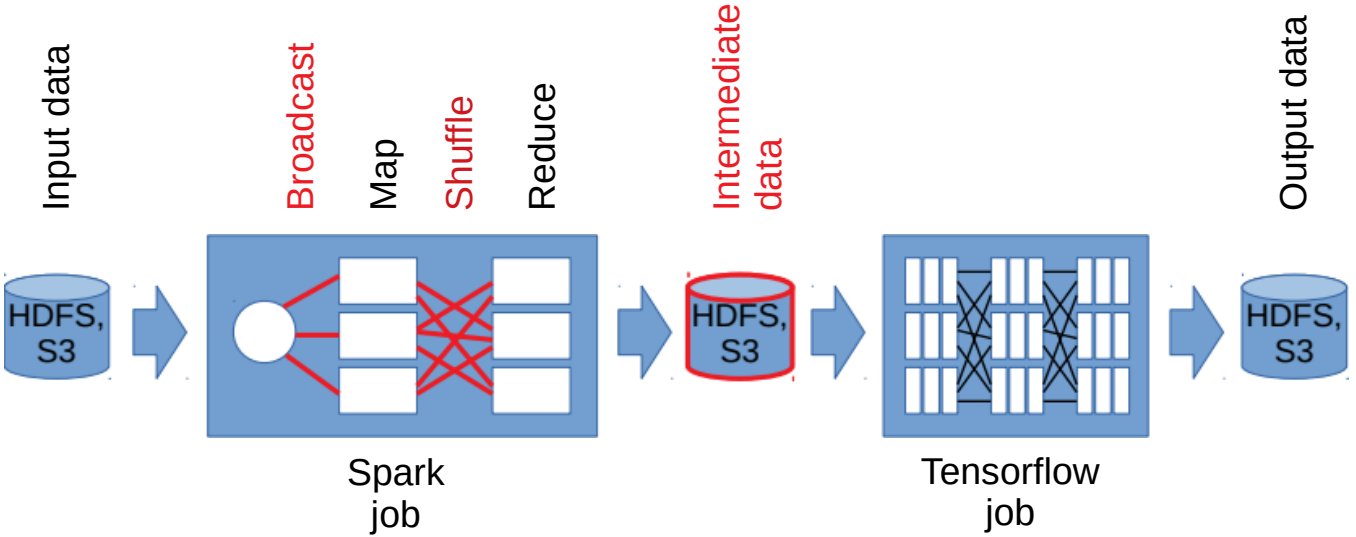
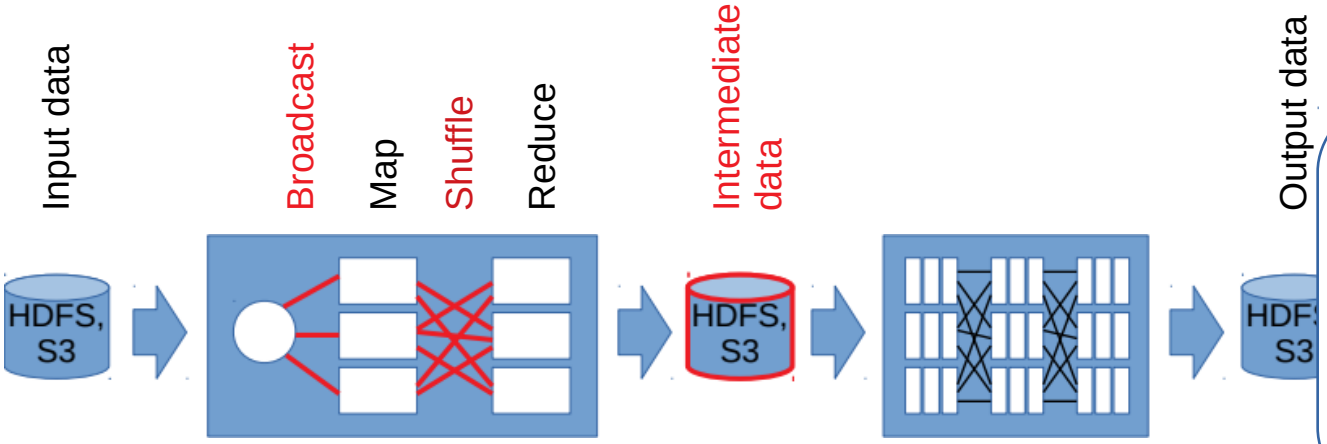
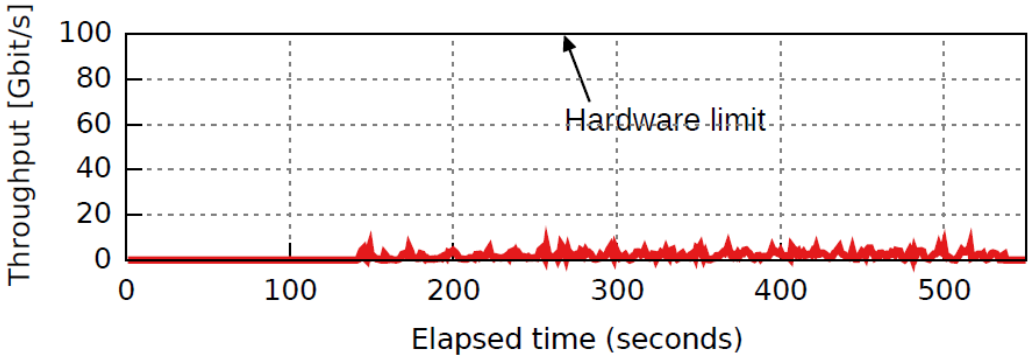
Managing Temporary Data



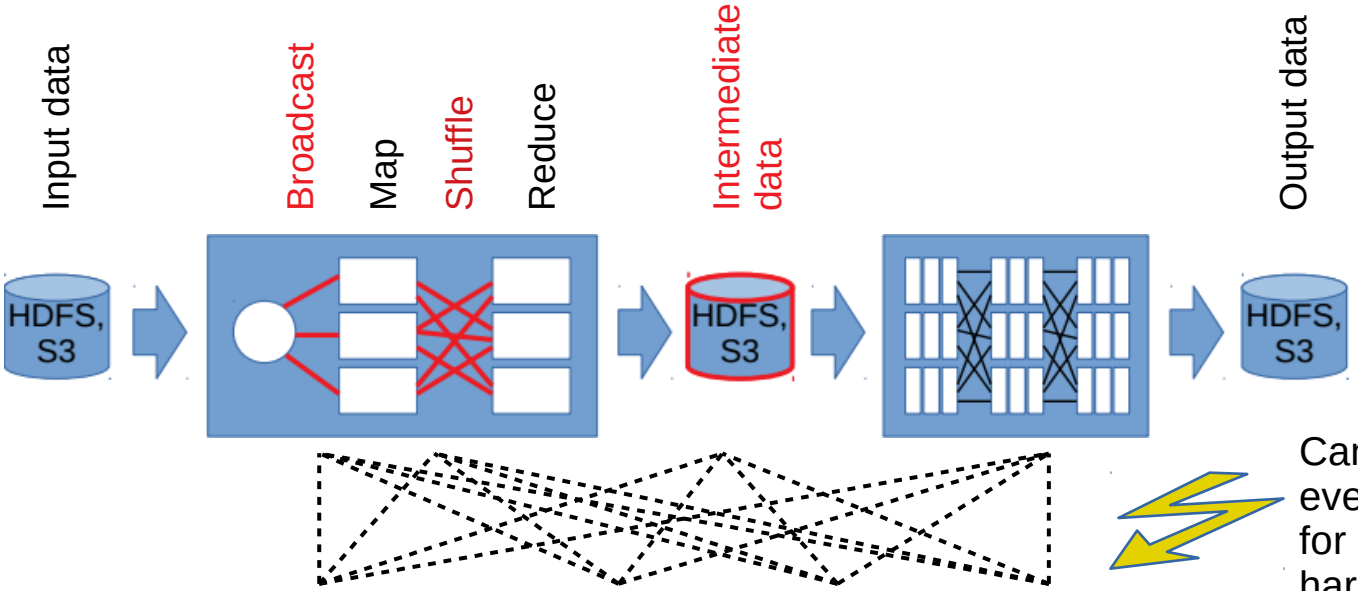
Running on Modern Hardware



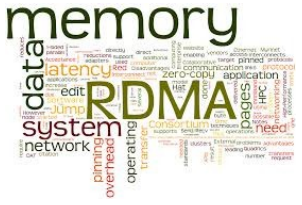


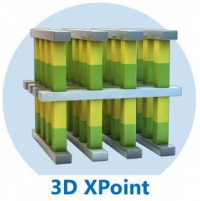
Efficiently leveraging fast networking and storage hardware is difficult

Inflexible Software Stacks

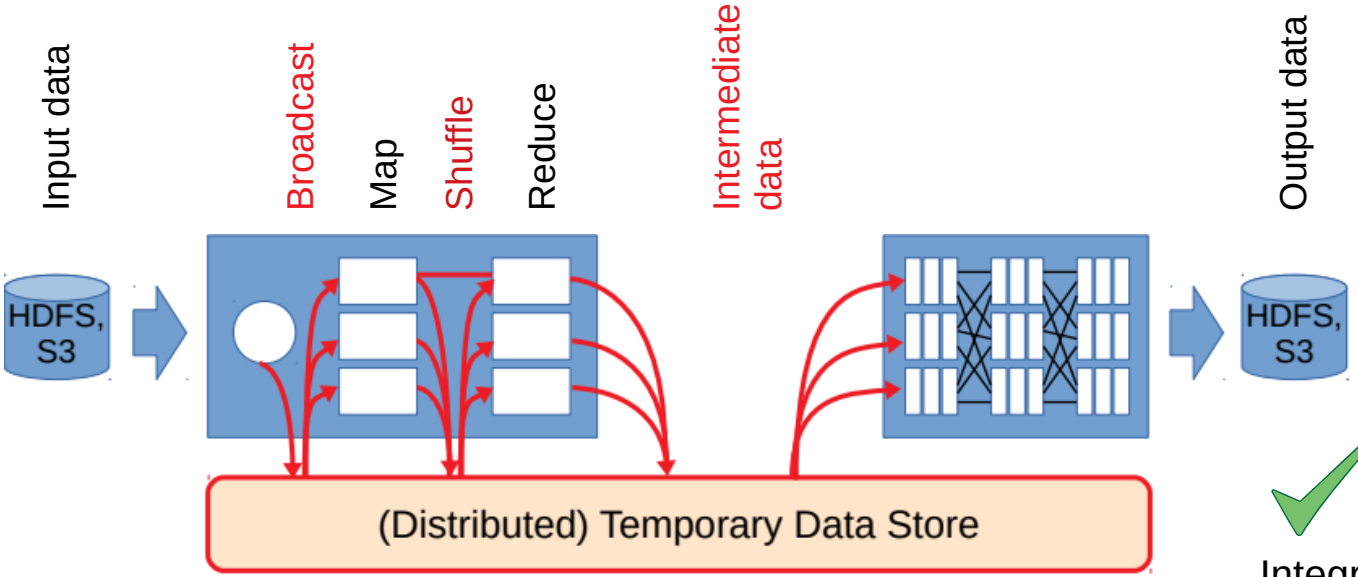


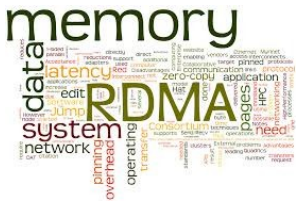
Can't implement every operation for all the different hardware and deployment options

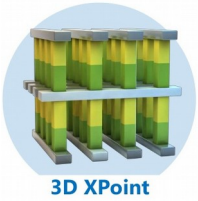




Flexible: Using an External Store







Integrate hardware once and support different operations and frameworks

In the Talk...

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- Can we use existing distributed KV stores or filesystems?
- NodeKernel: distributed storage architecture for temporary data storage designed for RDMA & NVMe Flash
  - Fast, flexible, easy to use from Spark, Flink, etc.