

MS \rightarrow RW

Reduce Callable

- reduce worker host
- reduce worker port
(new Socket(reduceHost, reducePort);
- ReduceWorkerCommand

Reduce Worker Command

- create List<ShuffleCallable>
- create ExecutorService as local variable in run().
- call invokeAll()
- create a concurrentHashMap<key, List<Callable>> and pass it to the ShuffleCallable's constructors.
- When invokeAll returns, all of the shuffle callables are finished executing meaning that the map has all of the keys/values inside.
- For each key in the map, execute the reduce task on the key and write the result to the final result file.

RW \rightarrow MW

Shuffle Callable

- MapWorker host
- map worker port
- ShuffleWorkerCommand
- reads key/value pairs from the map worker (ie, the shuffle worker command)

Shuffle Worker Command

- reads an intermediate results file, sends key/value pairs back to the reduce worker (ie, the shuffle callable).