[MAPREDUCE-4842](https://www.google.com/url?q=https://issues.apache.org/jira/browse/MAPREDUCE-4842&sa=D&source=editors&ust=1751358345889455&usg=AOvVaw0JRSLY5lVqVsWUfb1oNNgz)

Shuffle race can hang reducer

**(1)  Log information**

This bug is duplicated by[mapreduce-5423](https://www.google.com/url?q=https://issues.apache.org/jira/browse/MAPREDUCE-5423&sa=D&source=editors&ust=1751358345889825&usg=AOvVaw19qz4t6ofn8vLuQUYNg89B) , so we use the log from mapreduce-5423 to analyze this bug.

The logs are from reducers.

2013-07-18 04:32:28,135 INFO [main] org.apache.hadoop.mapreduce.task.reduce.MergeManager: MergerManager: memoryLimit=1503238528, maxSingleShuffleLimit=375809632, mergeThreshold=992137472, ioSortFactor=10, memToMemMergeOutputsThreshold=10

2013-07-18 04:32:28,138 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0 Thread started: EventFetcher for fetching Map Completion Events

2013-07-18 04:32:28,146 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0: Got 1 new map-outputs

2013-07-18 04:32:28,146 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 1 to fetcher#1

2013-07-18 04:32:28,146 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 1 of 1 to 101-09-04.sc1.verticloud.com:8080 to fetcher#1

2013-07-18 04:32:28,319 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000017\_0 sent hash and receievd reply

2013-07-18 04:32:28,320 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#1 about to shuffle output of map attempt\_1373902166027\_0622\_m\_000017\_0 decomp: 27 len: 31 to MEMORY

2013-07-18 04:32:28,325 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 27 bytes from map-output for attempt\_1373902166027\_0622\_m\_000017\_0

2013-07-18 04:32:28,325 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 27, inMemoryMapOutputs.size() -> 1, commitMemory -> 0, usedMemory ->27

2013-07-18 04:32:28,325 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: 101-09-04.sc1.verticloud.com:8080 freed by fetcher#1 in 179s

2013-07-18 04:32:33,158 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0: Got 1 new map-outputs

2013-07-18 04:32:33,158 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 1 to fetcher#1

2013-07-18 04:32:33,158 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 1 of 1 to 101-09-04.sc1.verticloud.com:8080 to fetcher#1

2013-07-18 04:32:33,161 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000016\_0 sent hash and receievd reply

2013-07-18 04:32:33,200 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#1 about to shuffle output of map attempt\_1373902166027\_0622\_m\_000016\_0 decomp: 55841282 len: 55841286 to MEMORY

2013-07-18 04:32:33,322 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 55841282 bytes from map-output for attempt\_1373902166027\_0622\_m\_000016\_0

2013-07-18 04:32:33,323 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 55841282, inMemoryMapOutputs.size() -> 2, commitMemory -> 27, usedMemory ->55841309

2013-07-18 04:32:39,594 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 118022137 bytes from map-output for attempt\_1373902166027\_0622\_m\_000015\_0

2013-07-18 04:32:39,594 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 118022137, inMemoryMapOutputs.size() -> 3, commitMemory -> 55841309, usedMemory ->173863446

2013-07-18 04:32:39,594 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: 101-09-04.sc1.verticloud.com:8080 freed by fetcher#1 in 413s

2013-07-18 04:32:42,188 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0: Got 1 new map-outputs

2013-07-18 04:32:42,188 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 1 to fetcher#1

2013-07-18 04:32:42,188 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 1 of 1 to 101-09-04.sc1.verticloud.com:8080 to fetcher#1

2013-07-18 04:32:42,190 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000014\_0 sent hash and receievd reply

2013-07-18 04:32:42,277 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#1 about to shuffle output of map attempt\_1373902166027\_0622\_m\_000014\_0 decomp: 140715962 len: 140715966 to MEMORY

2013-07-18 04:32:42,493 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 140715962 bytes from map-output for attempt\_1373902166027\_0622\_m\_000014\_0

2013-07-18 04:32:42,493 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 140715962, inMemoryMapOutputs.size() -> 4, commitMemory -> 173863446, usedMemory ->314579408

2013-07-18 04:32:42,494 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: 101-09-04.sc1.verticloud.com:8080 freed by fetcher#1 in 306s

2013-07-18 04:32:43,192 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0: Got 1 new map-outputs

2013-07-18 04:32:43,192 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 1 to fetcher#1

2013-07-18 04:32:43,192 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 1 of 1 to 101-09-04.sc1.verticloud.com:8080 to fetcher#1

2013-07-18 04:32:43,195 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000013\_0 sent hash and receievd reply

2013-07-18 04:32:43,280 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#1 about to shuffle output of map attempt\_1373902166027\_0622\_m\_000013\_0 decomp: 141243082 len: 141243086 to MEMORY

2013-07-18 04:32:43,506 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 141243082 bytes from map-output for attempt\_1373902166027\_0622\_m\_000013\_0

2013-07-18 04:32:43,506 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 141243082, inMemoryMapOutputs.size() -> 5, commitMemory -> 314579408, usedMemory ->455822490

2013-07-18 04:32:43,507 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: 101-09-04.sc1.verticloud.com:8080 freed by fetcher#1 in 315s

2013-07-18 04:32:44,195 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0: Got 1 new map-outputs

2013-07-18 04:32:44,195 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 1 to fetcher#1

2013-07-18 04:32:44,195 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 1 of 1 to 101-09-04.sc1.verticloud.com:8080 to fetcher#1

2013-07-18 04:32:44,198 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000011\_0 sent hash and receievd reply

2013-07-18 04:32:44,305 INFO fetcher#1 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#1 about to shuffle output of map attempt\_1373902166027\_0622\_m\_000011\_0 decomp: 173528412 len: 173528416 to MEMORY

...

2013-07-18 04:32:56,901 INFO fetcher#2 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 282474777 bytes from map-output for attempt\_1373902166027\_0622\_m\_000001\_0

2013-07-18 04:32:56,901 INFO fetcher#2 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 282474777, inMemoryMapOutputs.size() -> 5, commitMemory -> 1179552807, usedMemory ->1462027584

2013-07-18 04:32:56,901 INFO fetcher#2 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: 101-09-04.sc1.verticloud.com:8080 freed by fetcher#2 in 2682s

2013-07-18 04:32:56,901 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 4 to fetcher#4

2013-07-18 04:32:56,902 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 4 of 4 to 101-09-04.sc1.verticloud.com:8080 to fetcher#4

2013-07-18 04:32:56,904 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000006\_0,attempt\_1373902166027\_0622\_m\_000002\_0,attempt\_1373902166027\_0622\_m\_000003\_0,attempt\_1373902166027\_0622\_m\_000005\_0 sent hash and receievd reply

2013-07-18 04:32:57,336 INFO [EventFetcher for fetching Map Completion Events] org.apache.hadoop.mapreduce.task.reduce.EventFetcher: attempt\_1373902166027\_0622\_r\_000001\_0: Got 1 new map-outputs

2013-07-18 04:32:57,414 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#4 about to shuffle output of map attempt\_1373902166027\_0622\_m\_000006\_0 decomp: 280156692 len: 280156696 to MEMORY

2013-07-18 04:32:57,867 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.Fetcher: Read 280156692 bytes from map-output for attempt\_1373902166027\_0622\_m\_000006\_0

2013-07-18 04:32:57,867 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.MergeManager: closeInMemoryFile -> map-output of size: 280156692, inMemoryMapOutputs.size() -> 6, commitMemory -> 1462027584, usedMemory ->1742184276

2013-07-18 04:32:57,900 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#4 - MergerManager returned Status.WAIT ...

2013-07-18 04:32:57,901 INFO fetcher#4 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: 101-09-04.sc1.verticloud.com:8080 freed by fetcher#4 in 999s

2013-07-18 04:32:57,901 INFO fetcher#3 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: Assiging 101-09-04.sc1.verticloud.com:8080 with 4 to fetcher#3

2013-07-18 04:32:57,901 INFO fetcher#3 org.apache.hadoop.mapreduce.task.reduce.ShuffleScheduler: assigned 4 of 4 to 101-09-04.sc1.verticloud.com:8080 to fetcher#3

2013-07-18 04:32:57,903 INFO fetcher#3 org.apache.hadoop.mapreduce.task.reduce.Fetcher: for url=8080/mapOutput?job=job\_1373902166027\_0622&reduce=1&map=attempt\_1373902166027\_0622\_m\_000000\_0,attempt\_1373902166027\_0622\_m\_000002\_0,attempt\_1373902166027\_0622\_m\_000005\_0,attempt\_1373902166027\_0622\_m\_000003\_0 sent hash and receievd reply

2013-07-18 04:32:57,904 INFO fetcher#3 org.apache.hadoop.mapreduce.task.reduce.Fetcher: fetcher#3 - MergerManager returned Status.WAIT ...