[MAPREDUCE-4801](https://www.google.com/url?q=https://issues.apache.org/jira/browse/MAPREDUCE-4801&sa=D&source=editors&ust=1751358310088395&usg=AOvVaw3P9nahdn8erQ-9Ex9R44gU)

ShuffleHandler can generate large logs due to prematurely closed channels

**(1)  Log information**

**(1.1) Roles in this case**

multiple worker nodes (NM running in each node): each node is the client-side and server-side at the same time.

**(1.2) Symptoms**

Description: Many nodes on a cluster ran out of disk space, because the NodeManager logs were huge. The logs showed many, many shuffle errors due to either ClosedChannelException or IOException from "Connection reset by peer" or "Broken pipe". Some sample exceptions:( in NodeManager logs)

2012-11-15 12:47:02,365 [New I/O server worker #1-14] ERROR org.apache.hadoop.mapred.ShuffleHandler: Shuffle error:

java.io.IOException: Connection reset by peer

            at sun.nio.ch.FileDispatcher.read0(Native Method)

            at sun.nio.ch.SocketDispatcher.read(SocketDispatcher.java:21)

            at sun.nio.ch.IOUtil.readIntoNativeBuffer(IOUtil.java:237)

            at sun.nio.ch.IOUtil.read(IOUtil.java:204)

            at sun.nio.ch.SocketChannelImpl.read(SocketChannelImpl.java:236)

            at org.jboss.netty.channel.socket.nio.NioWorker.read(NioWorker.java:321)

            at org.jboss.netty.channel.socket.nio.NioWorker.processSelectedKeys(NioWorker.java:280)

            at org.jboss.netty.channel.socket.nio.NioWorker.run(NioWorker.java:200)

            at java.util.concurrent.ThreadPoolExecutor$Worker.runTask(ThreadPoolExecutor.java:886)

            at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:908)

            at java.lang.Thread.run(Thread.java:619)

2012-11-15 12:47:02,366 [New I/O server worker #1-14] ERROR org.apache.hadoop.mapred.ShuffleHandler: Shuffle error [id: 0x01901fc1, /xx.xx.xx.xx:xx => /xx.xx.xx.xx:xx] EXCEPTION: java.io.IOException: Connection reset by peer

2012-11-15 12:47:02,366 [New I/O server worker #1-14] ERROR org.apache.hadoop.mapred.ShuffleHandler: Shuffle error:

java.nio.channels.ClosedChannelException

            at org.jboss.netty.channel.socket.nio.NioWorker.cleanUpWriteBuffer(NioWorker.java:616)

            at org.jboss.netty.channel.socket.nio.NioWorker.close(NioWorker.java:592)

            at org.jboss.netty.channel.socket.nio.NioWorker.read(NioWorker.java:355)

            at org.jboss.netty.channel.socket.nio.NioWorker.processSelectedKeys(NioWorker.java:280)

            at org.jboss.netty.channel.socket.nio.NioWorker.run(NioWorker.java:200)

            at java.util.concurrent.ThreadPoolExecutor$Worker.runTask(ThreadPoolExecutor.java:886)

            at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:908)

            at java.lang.Thread.run(Thread.java:619)

...

2012-11-15 12:47:02,367 [New I/O server worker #1-15] ERROR org.apache.hadoop.mapred.ShuffleHandler: Shuffle error:

java.io.IOException: Broken pipe

            at sun.nio.ch.FileDispatcher.write0(Native Method)

            at sun.nio.ch.SocketDispatcher.write(SocketDispatcher.java:29)

            at sun.nio.ch.IOUtil.writeFromNativeBuffer(IOUtil.java:100)

            at sun.nio.ch.IOUtil.write(IOUtil.java:56)

            at sun.nio.ch.SocketChannelImpl.write(SocketChannelImpl.java:334)

            at org.jboss.netty.channel.socket.nio.SocketSendBufferPool$PooledSendBuffer.transferTo(SocketSendBufferPool.java:239)

            at org.jboss.netty.channel.socket.nio.NioWorker.write0(NioWorker.java:469)

            at org.jboss.netty.channel.socket.nio.NioWorker.writeFromUserCode(NioWorker.java:387)

            at org.jboss.netty.channel.socket.nio.NioServerSocketPipelineSink.handleAcceptedSocket(NioServerSocketPipelineSink.java:137)

            at org.jboss.netty.channel.socket.nio.NioServerSocketPipelineSink.eventSunk(NioServerSocketPipelineSink.java:76)

            at org.jboss.netty.handler.codec.oneone.OneToOneEncoder.handleDownstream(OneToOneEncoder.java:68)

            at org.jboss.netty.handler.stream.ChunkedWriteHandler.flush(ChunkedWriteHandler.java:255)

            at org.jboss.netty.handler.stream.ChunkedWriteHandler.handleDownstream(ChunkedWriteHandler.java:124)

            at org.jboss.netty.channel.Channels.write(Channels.java:611)

            at org.jboss.netty.channel.Channels.write(Channels.java:578)

            at org.jboss.netty.channel.AbstractChannel.write(AbstractChannel.java:259)

            at org.apache.hadoop.mapred.ShuffleHandler$Shuffle.sendMapOutput(ShuffleHandler.java:477)

            at org.apache.hadoop.mapred.ShuffleHandler$Shuffle.messageReceived(ShuffleHandler.java:397)

            at org.jboss.netty.handler.stream.ChunkedWriteHandler.handleUpstream(ChunkedWriteHandler.java:148)

            at org.jboss.netty.handler.codec.http.HttpChunkAggregator.messageReceived(HttpChunkAggregator.java:116)

            at org.jboss.netty.channel.Channels.fireMessageReceived(Channels.java:302)

            at org.jboss.netty.handler.codec.replay.ReplayingDecoder.unfoldAndfireMessageReceived(ReplayingDecoder.java:522)

            at org.jboss.netty.handler.codec.replay.ReplayingDecoder.callDecode(ReplayingDecoder.java:506)

            at org.jboss.netty.handler.codec.replay.ReplayingDecoder.messageReceived(ReplayingDecoder.java:443)

            at org.jboss.netty.channel.Channels.fireMessageReceived(Channels.java:274)

            at org.jboss.netty.channel.Channels.fireMessageReceived(Channels.java:261)

            at org.jboss.netty.channel.socket.nio.NioWorker.read(NioWorker.java:349)

            at org.jboss.netty.channel.socket.nio.NioWorker.processSelectedKeys(NioWorker.java:280)

            at org.jboss.netty.channel.socket.nio.NioWorker.run(NioWorker.java:200)

            at java.util.concurrent.ThreadPoolExecutor$Worker.runTask(ThreadPoolExecutor.java:886)

            at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:908)

            at java.lang.Thread.run(Thread.java:619)

2012-11-15 12:47:02,367 [New I/O server worker #1-15] ERROR org.apache.hadoop.mapred.ShuffleHandler: Shuffle error [id: 0x01fd225b, /xx.xx.xx.xx:xx => /xx.xx.xx.xx:xx] EXCEPTION: java.io.IOException: Broken pipe

2012-11-15 12:47:02,367 [New I/O server worker #1-15] ERROR org.apache.hadoop.mapred.ShuffleHandler: Shuffle error:

java.nio.channels.ClosedChannelException

            at org.jboss.netty.channel.socket.nio.NioWorker.cleanUpWriteBuffer(NioWorker.java:636)

            at org.jboss.netty.channel.socket.nio.NioWorker.close(NioWorker.java:592)

            at org.jboss.netty.channel.socket.nio.NioWorker.write0(NioWorker.java:512)

            at org.jboss.netty.channel.socket.nio.NioWorker.writeFromUserCode(NioWorker.java:387)

            at org.jboss.netty.channel.socket.nio.NioServerSocketPipelineSink.handleAcceptedSocket(NioServerSocketPipelineSink.java:137)

            at org.jboss.netty.channel.socket.nio.NioServerSocketPipelineSink.eventSunk(NioServerSocketPipelineSink.java:76)

            at org.jboss.netty.handler.codec.oneone.OneToOneEncoder.handleDownstream(OneToOneEncoder.java:68)

            at org.jboss.netty.handler.stream.ChunkedWriteHandler.flush(ChunkedWriteHandler.java:255)

            at org.jboss.netty.handler.stream.ChunkedWriteHandler.handleDownstream(ChunkedWriteHandler.java:124)

            at org.jboss.netty.channel.Channels.write(Channels.java:611)

            at org.jboss.netty.channel.Channels.write(Channels.java:578)

            at org.jboss.netty.channel.AbstractChannel.write(AbstractChannel.java:259)

            at org.apache.hadoop.mapred.ShuffleHandler$Shuffle.sendMapOutput(ShuffleHandler.java:477)

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            at org.jboss.netty.handler.stream.ChunkedWriteHandler.handleUpstream(ChunkedWriteHandler.java:148)

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            at org.jboss.netty.handler.codec.replay.ReplayingDecoder.callDecode(ReplayingDecoder.java:506)

            at org.jboss.netty.handler.codec.replay.ReplayingDecoder.messageReceived(ReplayingDecoder.java:443)

            at org.jboss.netty.channel.Channels.fireMessageReceived(Channels.java:274)

            at org.jboss.netty.channel.Channels.fireMessageReceived(Channels.java:261)

            at org.jboss.netty.channel.socket.nio.NioWorker.read(NioWorker.java:349)

            at org.jboss.netty.channel.socket.nio.NioWorker.processSelectedKeys(NioWorker.java:280)

            at org.jboss.netty.channel.socket.nio.NioWorker.run(NioWorker.java:200)

            at java.util.concurrent.ThreadPoolExecutor$Worker.runTask(ThreadPoolExecutor.java:886)

            at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:908)

            at java.lang.Thread.run(Thread.java:619)

The IOExceptions are shown in many nodes(NodeManager). The containers running in each node may contain several map/reduce tasks.