# "Java Heap space Out Of Memory Error" while running a mapreduce program

I'm facing Out Of Memory error while running a mapreduce program. If I keep 260 files in one folder and give as input to the mapreduce program, it is showing Java

No of files:318, No of blocks:1(blocksize:128MB), Hadoop is running on 32 bit system

```
My StackTrace:
     15/05/05 11:52:47 INFO input.FileInputFormat: Total input paths to process : 318 15/05/05 11:52:47 INFO input.CombineFileInputFormat: DEBUG: Terminated node allocation with : CompletedNodes: 1, size left: 52027734
     15/05/05 11:52:47 INFO mapreduce. JobSubmitter: number of splits:1
     15/05/05 11:52:47 INFO mapreduce. JobSubmitter: Submitting tokens for job: job_local634564612_0001 15/05/05 11:52:47 WARN conf.Configuration: file:/app/hadoop/tmp/mapred/staging/raghuveer634564612/.staging/job_local634564612_0001/job.xml:an attempt to overri
      15/05/05 11:52:47 WARN conf.Configuration: file:/app/hadoop/tmp/mapred/staging/raghuveer634564612/.staging/job_local634564612_0001/job.xml:an attempt to overri
end-notification.max.attempts; Ignoring.

15/05/05 11:52:48 WARN conf.Configuration: file:/var/hadoop/mapreduce/localRunner/raghuveer/job_local634564612_0001/job_local634564612_0001.xml:an attempt to o 15/05/05 11:52:48 WARN conf.Configuration: file:/var/hadoop/mapreduce/localRunner/raghuveer/job_local634564612_0001/job_local634564612_0001.xml:an attempt to o
     15/05/05 11:52:48 INFO mapreduce.Job: The url to track the job: http://localhost:8080/15/05/05 11:52:48 INFO mapreduce.Job: Running job: job_local634564612_0001 15/05/05 11:52:48 INFO mapred.LocalJobRunner: OutputCommitter set in config null
     15/05/05 11:52:48 INFO mapred.LocalJobRunner: OutputCommitter is org.apache.hadoop.mapreduce.lib.output.FileOutputCommitter 15/05/05 11:52:48 INFO mapred.LocalJobRunner: Waiting for map tasks 15/05/05 11:52:48 INFO mapred.LocalJobRunner: Starting task: attempt_local634564612_0001_m_000000_0
     15/05/05 11:52:48 INFO mapred.Task: Using ResourceCalculatorProcessTree : [ ] 15/05/05 11:52:48 INFO mapred.MapTask: Processing split: Paths:/user/user/user/user/acal/upload/20120713T07-45-42.682358000Z_79.150.138.86-1412.c2s_ndttrace:0+78550,/user
/20120713T08-33-41.259331000Z_84.122.129.103-61321.c2s_ndttrace:0+19148,/user/usr/local/upload/20120713T08-33-54.972649000Z_86.69.144.214-49599.c2s_ndttrace:0+6301
     15/05/05 11:52:49 INFO mapreduce. Job: Job job_local634564612_0001 running in uber mode : false
     15/05/05\ 11{:}52{:}49\ INFO\ mapreduce. \mbox{\bf Job}:\ \mbox{map 0\% reduce 0\%}
     15/05/05 11:52:50 INFO mapred.MapTask: Map output collector class = org.apache.hadoop.mapred.MapTask$MapOutputBuffer
     15/05/05 11:52:53 INFO mapred.MapTask: (EQUATOR) 0 kvi 78643196(314572784)
     15/05/05 11:52:53 INFO mapred.MapTask: mapreduce.task.io.sort.mb: 300 15/05/05 11:52:53 INFO mapred.MapTask: soft limit at 251658240
     15/05/05 11:52:53 INFO mapred.MapTask: bufstart = 0; bufsvoid = 314572800
15/05/05 11:52:53 INFO mapred.MapTask: kvstart = 78643196; length = 19660800
15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload. 15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload.
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     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload. 15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (82) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload. 15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (82) is larger than packet data (68). Returning empty payload.
     15/05/05 11:52:54 WARN pcap.PcapReader: Payload start (74) is larger than packet data (68). Returning empty payload. 15/05/05 11:52:55 INFO mapred.MapTask: Starting flush of map output
     15/05/05 11:52:55 INFO mapred.MapTask: Spilling map output
     15/05/05 11:52:55 INFO mapred.MapTask: bufstart = 0; bufend = 105296; bufvoid = 314572800
15/05/05 11:52:55 INFO mapred.MapTask: kvstart = 78643196(314572784); kvend = 78637988(314551952); length = 5209/19660800
     15/05/05 11:52:55 INFO mapred.LocalJobRunner: map > map
     15/05/05 11:52:55 INFO mapred.MapTask: Finished spill 0
     15/05/05 11:52:55 INFO mapred.LocalJobRunner: map task executor complete.
     15/05/05 11:52:55 WARN mapred.LocalJobRunner: job_local634564612_0001
     java.lang.Exception: java.lang.OutOfMemoryError: Java heap space
at org.apache.hadoop.mapred.LocalJobRunner$Job.runTasks(LocalJobRunner.java:462)
           at org.apache.hadoop.mapred.LocalJobRunner$Job.run(LocalJobRunner.java:522)
     Caused by: java.lang.OutOfMemoryError: Java heap space
  at net.ripe.hadoop.pcap.PcapReader.nextPacket(PcapReader.java:208)
           at net.ripe.hadoop.pcap.PcapReader.access$0(PcapReader.java:173)
           \verb|at net.ripe.hadoop.pcap.PcapReader$PacketIterator.fetchNext(PcapReader.java:554)| \\
           at net.ripe.hadoop.pcap.PcapReader$PacketIterator.hasNext(PcapReader.iava:559)
           at net.ripe.hadoop.pcap.io.reader.PcapRecordReader.nextKeyValue(PcapRecordReader.java:57)
           at \ \texttt{net.ripe.hadoop.pcap.io.reader.CombineBinaryRecordReader.next} \\ \textbf{KeyValue(CombineBinaryRecordReader.java:} \\ \textbf{42)}
           at org.apache.hadoop.mapreduce.lib.input.CombineFileRecordReader.nextKeyValue(CombineFileRecordReader.java:69) at org.apache.hadoop.mapred.MapTask$NewTrackingRecordReader.nextKeyValue(MapTask.java:533)
           at org.apache.hadoop.mapreduce.task.MapContextImpl.nextKeyValue(MapContextImpl.java:80)
           at org.apache.hadoop.mapreduce.lib.map.WrappedMapper$Context.nextKeyValue(WrappedMapper.java:91) at org.apache.hadoop.mapreduce.Mapper.run(Mapper.java:144)
           at org.apache.hadoop.mapred.MapTask.runNewMapper(MapTask.java:764)
           at org.apache.hadoop.mapred.MapTask.run(MapTask.java:340) at org.apache.hadoop.mapred.LocalJobRunner$Job$MapTaskRunnable.run(LocalJobRunner.java:243)
           at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:511)
           at java.util.concurrent.FutureTask.run(FutureTask.java:266) at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1142)
           at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:617)
     at java.lang.Thread.run(Thread.java:745) 15/05/05 11:52:56 INFO mapreduce.Job: Job job_local634564612_0001 failed with state FAILED due to: NA
     15/05/05 11:52:56 INFO mapreduce.Job: Counters: 25
           File System Counters
FILE: Number of bytes read=29002348
                 FILE: Number of bytes written=29450636
                FILE: Number of read operations=0
FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=103142
HDFS: Number of bytes written=0
                 HDFS: Number of read operations=6
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=1
            Map-Reduce Framework
                Map input records=1303
                Map output records=1303
                 Map output bytes=105296
```

Map output materialized bytes=0 Input split bytes=38078 Combine input records=0 Spilled Records=0 Failed Shuffles=0 Merged Map outputs=0 GC time elapsed (ms)=593 CPU time spent (ms)=0 Physical memory (bytes) snapshot=0 Virtual memory (bytes) snapshot=0
Total committed heap usage (bytes)=1745092608 File Input Format Counters Bytes Read=0

java

hadoop mapreduce

can you share stack trace? - Abhishek May 18 '15 at 6:06 Which version/distribution are you using? - James Anderson May 18 '15 at 6:08 I'm using hadoop 2.4.1 – Divya Gangigunta May 18 '15 at 6:12 please suggest me on this issue ... - Divya Gangigunta May 18 '15 at 8:10

### 1 Answer

#### STEP 1:

Add this line in .bashrc file found in your hadoop home directory:

```
export JVM_ARGS="-Xms1024m -Xmx1024m"
```

This changes the java heap memory to 1024. Default is 128. If you were running a terminal hadoop job, then do this as hadoop user:

source ~/.bashrc

If you still get the error, try step 2.

### STEP 2:

Add this line in hadoop-env.sh file:

export HADOOP\_CLIENT\_OPTS="-Xmx1024m \$HADOOP\_CLIENT\_OPTS"

If still there is no luck, try step 3.

## STEP 3:

Add this property in mapred-site.xml file:

<name>mapred.child.java.opts</name> <value>-Xmx1024m</value>

All these steps increases the default java heap memory.

answered May 18 '15 at 9:25



Thanks for ur reply. I had tried the above mentioned steps. Actually, I have two folders in hdfs. one is upload(98MB) and other is download(48MB). I had given upload folder as input to mapreduce program.It's running fine.I had tried giving the download folder as input to the mapreduce program,now I'm facing Java Heap Space Out Of Memory error. I'm not getting why it is happening like this please help me out. - Divya Gangigunta May 18 '15 at 9:45

What does the download folder contain? - Rajesh N May 18 '15 at 11:14

Both upload and download folders contain mlab .c2s and .s2c trace files respectively -Divya Gangigunta May 18 '15 at 11:35

Thanks for ur help.I had resolved my issue. - Divya Gangigunta May 20 '15 at 10:38