1. 任务背景

针对Parallel GC，编写程序模拟内存分配与垃圾回收场景，能够反应出该GC的特点。解释它的GC日志。修改程序或JVM参数以达成特定目标，如更低的GC延迟。

2. 研究计划

- ☑ 实现GC测试用例
- ☑ 选择SeriralGC作为baseline，记录实验结果
- ☑ 选择ParrallelGC进行实验，记录实验结果
- ☑ 改变参数配置，优化GC延迟

3. GC日志分析

3.1 Java程序

```java
import java.time.LocalDateTime;
import java.util.ArrayList;
import java.util.List;

/**
 * GC测试用例
 */
public class TestGC {
    public static void main(String[] args) throws InterruptedException {
        System.out.println("==========================GC测试用例
========================");
        long start= System.currentTimeMillis();
        List<byte[]> list = new ArrayList<>();
        int maxIterations = 3000;
        for(int i=1;i<=maxIterations;i++){
            //新增1M
            list.add(new byte[1*1024*1024]);
            //每隔100 clear一次
            if(i%100==0){
                list.clear();
                System.out.printf("iteration:%5d\t\t清空List\n",i);
            }
            //休眠10ms
            Thread.sleep(10);
        }
        long end= System.currentTimeMillis();
        System.out.printf("耗费时间"+(end-start)+'s');
        System.out.println("测试完成");
    }
}
```

3.2 JVM参数

```
# 使用ParallelGC
-XX:+UseParallelGC
# 最大堆空间1G
-Xmx1024m
# 最小堆空间512M
-Xms512m
# 新生代空间256M
-Xmn256m
# 控制台输出日志
-XX:+PrintGCDetails
# 打印日志
-Xlog:gc*=debug:file=./log/gcParallel.log
```

3.3 GC参数配置

参数名字	详细配置
CPU	12
线程数	10
最大堆	1G
最小堆	512M
新生代大小	256M

3.4 GC日志

3.4.1 详细内容

```
[0.004s][warning][gc] -XX:+PrintGCDetails is deprecated. Will use -Xlog:gc*
instead.
[0.032s][debug  ][gc,heap] Minimum heap 536870912  Initial heap 536870912
Maximum heap 1073741824
[0.032s][info   ][gc      ] Using Parallel
[0.032s][debug  ][gc,heap,coops] Heap address: 0x00000000c0000000, size: 1024 MB,
Compressed Oops mode: 32-bit
[0.034s][info   ][gc,init      ] Version: 17.0.2+8-86 (release)
[0.034s][info   ][gc,init      ] CPUs: 12 total, 12 available
[0.034s][info   ][gc,init      ] Memory: 14188M
[0.034s][info   ][gc,init      ] Large Page Support: Disabled
[0.034s][info   ][gc,init      ] NUMA Support: Disabled
[0.034s][info   ][gc,init      ] Compressed Oops: Enabled (32-bit)
[0.034s][info   ][gc,init      ] Alignments: Space 512K, Generation 512K, Heap 2M
[0.034s][info   ][gc,init      ] Heap Min Capacity: 512M
[0.034s][info   ][gc,init      ] Heap Initial Capacity: 512M
[0.034s][info   ][gc,init      ] Heap Max Capacity: 1G
[0.034s][info   ][gc,init      ] Pre-touch: Disabled
[0.034s][info   ][gc,init      ] Parallel Workers: 10
```

```
[0.035s][info   ][gc,metaspace ] CDS archive(s) mapped at: [0x0000000800000000-
0x0000000800bc0000-0x0000000800bc0000), size 12320768, SharedBaseAddress:
0x0000000800000000, ArchiveRelocationMode: 0.
[0.035s][info   ][gc,metaspace ] Compressed class space mapped at:
0x0000000800c00000-0x0000000840c00000, reserved size: 1073741824
[0.035s][info   ][gc,metaspace ] Narrow klass base: 0x0000000800000000, Narrow
klass shift: 0, Narrow klass range: 0x100000000
[3.026s][debug ][gc,heap       ] GC(0) Heap before GC invocations=1 (full 0):
[3.026s][debug ][gc,heap       ] GC(0)  PSYoungGen      total 229376K, used
195791K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[3.026s][debug ][gc,heap       ] GC(0)   eden space 196608K, 99% used
[0x00000000f0000000,0x00000000fbf33fc8,0x00000000fc000000)
[3.026s][debug ][gc,heap       ] GC(0)   from space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[3.026s][debug ][gc,heap       ] GC(0)   to   space 32768K, 0% used
[0x00000000fc000000,0x00000000fc000000,0x00000000fe000000)
[3.026s][debug ][gc,heap       ] GC(0)  ParOldGen      total 262144K, used 0K
[0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[3.026s][debug ][gc,heap       ] GC(0)   object space 262144K, 0% used
[0x00000000c0000000,0x00000000c0000000,0x00000000d0000000)
[3.026s][debug ][gc,heap       ] GC(0)  Metaspace       used 1020K, committed
1216K, reserved 1056768K
[3.026s][debug ][gc,heap       ] GC(0)   class space   used 83K, committed 192K,
reserved 1048576K
[3.026s][debug ][gc,tlab       ] GC(0) TLAB totals: thrds: 5  refills: 5 max: 1
slow allocs: 173 max 173 waste: 76.1% gc: 15313744B max: 4026448B slow: 0B max:
0B
[3.026s][info   ][gc,start      ] GC(0) Pause Young (Allocation Failure)
[3.026s][debug ][gc,phases,start] GC(0) Scavenge
[3.043s][debug ][gc,phases      ] GC(0) Scavenge 16.516ms
[3.043s][debug ][gc,phases,start] GC(0) Reference Processing
[3.043s][debug ][gc,ref         ] GC(0) Skipped phase 1 of Reference Processing:
no references
[3.043s][debug ][gc,ref         ] GC(0) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[3.043s][debug ][gc,ref         ] GC(0) Skipped phase 3 of Reference Processing:
no references
[3.043s][debug ][gc,ref         ] GC(0) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[3.043s][debug ][gc,phases,ref ] GC(0) Reference Processing: 0.1ms
[3.043s][debug ][gc,phases,ref ] GC(0)   Reconsider SoftReferences: 0.0ms
[3.043s][debug ][gc,phases,ref ] GC(0)     SoftRef (ms):
skipped
[3.043s][debug ][gc,phases,ref ] GC(0)   Notify Soft/WeakReferences: 0.1ms
[3.043s][debug ][gc,phases,ref ] GC(0)     SoftRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[3.043s][debug ][gc,phases,ref ] GC(0)     WeakRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[3.043s][debug ][gc,phases,ref ] GC(0)     FinalRef (ms):               Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[3.044s][debug ][gc,phases,ref ] GC(0)     Total (ms):                  Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[3.044s][debug ][gc,phases,ref ] GC(0)   Notify and keep alive finalizable:
0.0ms
[3.044s][debug ][gc,phases,ref ] GC(0)     FinalRef (ms):
skipped
```

```
[3.044s][debug  ][gc,phases,ref  ] GC(0)    Notify PhantomReferences: 0.0ms
[3.044s][debug  ][gc,phases,ref  ] GC(0)      PhantomRef (ms):              Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[3.044s][debug  ][gc,phases,ref  ] GC(0)    SoftReference:
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Discovered: 0
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Cleared: 0
[3.044s][debug  ][gc,phases,ref  ] GC(0)    WeakReference:
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Discovered: 149
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Cleared: 105
[3.044s][debug  ][gc,phases,ref  ] GC(0)    FinalReference:
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Discovered: 0
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Cleared: 0
[3.044s][debug  ][gc,phases,ref  ] GC(0)    PhantomReference:
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Discovered: 35
[3.044s][debug  ][gc,phases,ref  ] GC(0)      Cleared: 5
[3.044s][debug  ][gc,phases      ] GC(0) Reference Processing 0.840ms
[3.044s][debug  ][gc,phases,start] GC(0) Weak Processing
[3.044s][debug  ][gc,phases      ] GC(0)    VM Weak                        Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Total                        Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)    ObjectSynchronizer Weak        Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Total                        Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)    JVMTI Tag Weak OopStorage      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)    StringTable Weak               Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.2, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Dead                         Min:
0, Avg:  0.8, Max: 3, Diff: 3, Sum: 5, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Total                        Min:
448, Avg: 891.8, Max: 1344, Diff: 896, Sum: 5351, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)    ResolvedMethodTable weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Dead                         Min:
0, Avg:  0.2, Max: 1, Diff: 1, Sum: 1, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Total                        Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)    JNI Weak                       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)      Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.044s][debug  ][gc,phases      ] GC(0)    StringDedup Table weak         Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
```

```
[3.045s][debug ][gc,phases      ] GC(0)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)   StringDedup Requests0 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)   StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)   Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[3.045s][debug ][gc,phases      ] GC(0) Weak Processing 0.880ms
[3.045s][debug ][gc,ergo        ] GC(0) AdaptiveSizeStart:  collection: 1
[3.045s][debug ][gc,age         ] GC(0) Desired survivor size 33554432 bytes,
new threshold 7 (max threshold 15)
[3.045s][debug ][gc,ergo        ] GC(0)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.006217
major_cost: 0.000000 mutator_cost: 0.993783 throughput_goal: 0.990000
[3.045s][debug ][gc,ergo        ] GC(0) Live_space: 301736448 free_space:
402653184
[3.045s][debug ][gc,ergo        ] GC(0) Old eden_size: 201326592
desired_eden_size: 201326592
[3.045s][debug ][gc,ergo        ] GC(0) AdaptiveSizeStop: collection: 1
[3.045s][info  ][gc,heap        ] GC(0) PSYoungGen: 195791K(229376K)-
>32520K(229376K) Eden: 195791K(196608K)->0K(196608K) From: 0K(32768K)-
>32520K(32768K)
[3.045s][info  ][gc,heap        ] GC(0) ParOldGen: 0K(262144K)->45064K(262144K)
[3.045s][info  ][gc,metaspace   ] GC(0) Metaspace: 1020K(1216K)->1020K(1216K)
NonClass: 937K(1024K)->937K(1024K) Class: 83K(192K)->83K(192K)
[3.045s][info  ][gc             ] GC(0) Pause Young (Allocation Failure) 191M-
>75M(480M) 19.017ms
[3.045s][info  ][gc,cpu         ] GC(0) User=0.06s Sys=0.09s Real=0.02s
[3.045s][debug ][gc,heap        ] GC(0) Heap after GC invocations=1 (full 0):
[3.045s][debug ][gc,heap        ] GC(0)  PSYoungGen      total 229376K, used
32520K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[3.045s][debug ][gc,heap        ] GC(0)   eden space 196608K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fc000000)
[3.045s][debug ][gc,heap        ] GC(0)   from space 32768K, 99% used
[0x00000000fc000000,0x00000000fdfc2200,0x00000000fe000000)
[3.045s][debug ][gc,heap        ] GC(0)   to   space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[3.045s][debug ][gc,heap        ] GC(0)  ParOldGen       total 262144K, used
45064K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[3.045s][debug ][gc,heap        ] GC(0)   object space 262144K, 17% used
[0x00000000c0000000,0x00000000c2c022c0,0x00000000d0000000)
```

```
[3.045s][debug  ][gc,heap        ] GC(0)  Metaspace       used 1020K, committed
1216K, reserved 1056768K
[3.045s][debug  ][gc,heap        ] GC(0)   class space    used 83K, committed
192K, reserved 1048576K
[3.045s][debug  ][gc,task,time   ] GC(0) VM-Thread 30256020 30430761 30453743
[6.192s][debug  ][gc,heap        ] GC(1) Heap before GC invocations=2 (full 0):
[6.192s][debug  ][gc,heap        ] GC(1) PSYoungGen      total 229376K, used
228770K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[6.192s][debug  ][gc,heap        ] GC(1)   eden space 196608K, 99% used
[0x00000000f0000000,0x00000000fbfa66a0,0x00000000fc000000)
[6.192s][debug  ][gc,heap        ] GC(1)   from space 32768K, 99% used
[0x00000000fc000000,0x00000000fdfc2200,0x00000000fe000000)
[6.192s][debug  ][gc,heap        ] GC(1)   to   space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[6.192s][debug  ][gc,heap        ] GC(1) ParOldGen      total 262144K, used
45064K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[6.192s][debug  ][gc,heap        ] GC(1)   object space 262144K, 17% used
[0x00000000c0000000,0x00000000c2c022c0,0x00000000d0000000)
[6.192s][debug  ][gc,heap        ] GC(1)  Metaspace       used 1022K, committed
1216K, reserved 1056768K
[6.192s][debug  ][gc,heap        ] GC(1)   class space    used 83K, committed
192K, reserved 1048576K
[6.192s][debug  ][gc,tlab        ] GC(1) TLAB totals: thrds: 1  refills: 1 max: 1
slow allocs: 187 max 187 waste: 13.9% gc: 676240B max: 676240B slow: 0B max: 0B
[6.192s][info   ][gc,start       ] GC(1) Pause Young (Allocation Failure)
[6.192s][debug  ][gc,phases,start] GC(1) Scavenge
[6.200s][debug  ][gc,phases      ] GC(1) Scavenge 8.119ms
[6.200s][debug  ][gc,phases,start] GC(1) Reference Processing
[6.200s][debug  ][gc,ref         ] GC(1) Skipped phase 1 of Reference Processing:
no references
[6.200s][debug  ][gc,ref         ] GC(1) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[6.200s][debug  ][gc,ref         ] GC(1) Skipped phase 3 of Reference Processing:
no references
[6.200s][debug  ][gc,ref         ] GC(1) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[6.201s][debug  ][gc,phases,ref  ] GC(1) Reference Processing: 0.1ms
[6.201s][debug  ][gc,phases,ref  ] GC(1)   Reconsider SoftReferences: 0.0ms
[6.201s][debug  ][gc,phases,ref  ] GC(1)     SoftRef (ms):
skipped
[6.201s][debug  ][gc,phases,ref  ] GC(1)   Notify Soft/WeakReferences: 0.0ms
[6.201s][debug  ][gc,phases,ref  ] GC(1)     SoftRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[6.201s][debug  ][gc,phases,ref  ] GC(1)     WeakRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[6.201s][debug  ][gc,phases,ref  ] GC(1)     FinalRef (ms):               Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[6.201s][debug  ][gc,phases,ref  ] GC(1)     Total (ms):                  Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[6.201s][debug  ][gc,phases,ref  ] GC(1)   Notify and keep alive finalizable:
0.0ms
[6.201s][debug  ][gc,phases,ref  ] GC(1)     FinalRef (ms):
skipped
[6.201s][debug  ][gc,phases,ref  ] GC(1)   Notify PhantomReferences: 0.0ms
[6.201s][debug  ][gc,phases,ref  ] GC(1)     PhantomRef (ms):             Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
```

```
[6.201s][debug  ][gc,phases,ref ] GC(1)    SoftReference:
[6.201s][debug  ][gc,phases,ref ] GC(1)      Discovered: 0
[6.201s][debug  ][gc,phases,ref ] GC(1)      Cleared: 0
[6.201s][debug  ][gc,phases,ref ] GC(1)    WeakReference:
[6.201s][debug  ][gc,phases,ref ] GC(1)      Discovered: 127
[6.201s][debug  ][gc,phases,ref ] GC(1)      Cleared: 127
[6.201s][debug  ][gc,phases,ref ] GC(1)    FinalReference:
[6.201s][debug  ][gc,phases,ref ] GC(1)      Discovered: 0
[6.201s][debug  ][gc,phases,ref ] GC(1)      Cleared: 0
[6.201s][debug  ][gc,phases,ref ] GC(1)    PhantomReference:
[6.201s][debug  ][gc,phases,ref ] GC(1)      Discovered: 5
[6.201s][debug  ][gc,phases,ref ] GC(1)      Cleared: 5
[6.201s][debug  ][gc,phases      ] GC(1) Reference Processing 0.641ms
[6.201s][debug  ][gc,phases,start] GC(1) Weak Processing
[6.201s][debug  ][gc,phases      ] GC(1)   VM Weak                      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Total                       Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)   ObjectSynchronizer Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Total                       Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)   JVMTI Tag Weak OopStorage    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)   StringTable Weak             Min:
0.1, Avg:  0.1, Max:  0.1, Diff:  0.0, Sum:  0.3, Workers: 6
[6.201s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Total                       Min:
512, Avg: 891.8, Max: 1344, Diff: 832, Sum: 5351, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)   ResolvedMethodTable weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Total                       Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)   JNI Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)   StringDedup Table weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug  ][gc,phases      ] GC(1)    Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
```

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[6.202s][debug ][gc,phases     ] GC(1)   StringDedup Requests0 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)   StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)   Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)     Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1)     Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[6.202s][debug ][gc,phases     ] GC(1) Weak Processing 0.852ms
[6.202s][debug ][gc,ergo       ] GC(1) AdaptiveSizeStart:  collection: 2
[6.202s][debug ][gc,age        ] GC(1) Desired survivor size 33554432 bytes,
new threshold 7 (max threshold 15)
[6.202s][debug ][gc,ergo       ] GC(1)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.004655
major_cost: 0.000000 mutator_cost: 0.995345 throughput_goal: 0.990000
[6.202s][debug ][gc,ergo       ] GC(1) Live_space: 301720064 free_space:
402653184
[6.202s][debug ][gc,ergo       ] GC(1) Old eden_size: 201326592
desired_eden_size: 201326592
[6.202s][debug ][gc,ergo       ] GC(1) AdaptiveSizeStop: collection: 2
[6.202s][info  ][gc,heap       ] GC(1) PSYoungGen: 228770K(229376K)-
>32488K(229376K) Eden: 196249K(196608K)->0K(196608K) From: 32520K(32768K)-
>32488K(32768K)
[6.202s][info  ][gc,heap       ] GC(1) ParOldGen: 45064K(262144K)-
>80913K(262144K)
[6.202s][info  ][gc,metaspace  ] GC(1) Metaspace: 1022K(1216K)->1022K(1216K)
NonClass: 939K(1024K)->939K(1024K) Class: 83K(192K)->83K(192K)
[6.202s][info  ][gc            ] GC(1) Pause Young (Allocation Failure) 267M-
>110M(480M) 10.025ms
[6.202s][info  ][gc,cpu        ] GC(1) User=0.03s Sys=0.12s Real=0.01s
[6.202s][debug ][gc,heap       ] GC(1) Heap after GC invocations=2 (full 0):
[6.202s][debug ][gc,heap       ] GC(1)  PSYoungGen      total 229376K, used
32488K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[6.202s][debug ][gc,heap       ] GC(1)   eden space 196608K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fc000000)
[6.202s][debug ][gc,heap       ] GC(1)   from space 32768K, 99% used
[0x00000000fe000000,0x00000000fffba200,0x0000000100000000)
[6.202s][debug ][gc,heap       ] GC(1)   to   space 32768K, 0% used
[0x00000000fc000000,0x00000000fc000000,0x00000000fe000000)
[6.202s][debug ][gc,heap       ] GC(1)  ParOldGen       total 262144K, used
80913K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[6.202s][debug ][gc,heap       ] GC(1)   object space 262144K, 30% used
[0x00000000c0000000,0x00000000c4f044f0,0x00000000d0000000)
[6.202s][debug ][gc,heap       ] GC(1)  Metaspace       used 1022K, committed
1216K, reserved 1056768K
```

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[6.202s][debug  ][gc,heap        ] GC(1)   class space    used 83K, committed
192K, reserved 1048576K
[6.202s][debug  ][gc,task,time   ] GC(1) VM-Thread 61916301 62003679 62023474
[9.327s][debug  ][gc,heap        ] GC(2) Heap before GC invocations=3 (full 0):
[9.327s][debug  ][gc,heap        ] GC(2) PSYoungGen      total 229376K, used
228800K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[9.327s][debug  ][gc,heap        ] GC(2)   eden space 196608K, 99% used
[0x00000000f0000000,0x00000000fbfb6198,0x00000000fc000000)
[9.327s][debug  ][gc,heap        ] GC(2)   from space 32768K, 99% used
[0x00000000fe000000,0x00000000fffba200,0x0000000100000000)
[9.327s][debug  ][gc,heap        ] GC(2)   to   space 32768K, 0% used
[0x00000000fc000000,0x00000000fc000000,0x00000000fe000000)
[9.327s][debug  ][gc,heap        ] GC(2) ParOldGen       total 262144K, used
80913K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[9.327s][debug  ][gc,heap        ] GC(2)   object space 262144K, 30% used
[0x00000000c0000000,0x00000000c4f044f0,0x00000000d0000000)
[9.327s][debug  ][gc,heap        ] GC(2) Metaspace       used 1022K, committed
1216K, reserved 1056768K
[9.327s][debug  ][gc,heap        ] GC(2)   class space    used 83K, committed
192K, reserved 1048576K
[9.327s][debug  ][gc,tlab        ] GC(2) TLAB totals: thrds: 1  refills: 1 max: 1
slow allocs: 187 max 187 waste: 15.0% gc: 740488B max: 740488B slow: 0B max: 0B
[9.327s][info   ][gc,start       ] GC(2) Pause Young (Allocation Failure)
[9.327s][debug  ][gc,phases,start] GC(2) Scavenge
[9.334s][debug  ][gc,phases      ] GC(2) Scavenge 6.465ms
[9.334s][debug  ][gc,phases,start] GC(2) Reference Processing
[9.334s][debug  ][gc,ref         ] GC(2) Skipped phase 1 of Reference Processing:
no references
[9.334s][debug  ][gc,ref         ] GC(2) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[9.334s][debug  ][gc,ref         ] GC(2) Skipped phase 3 of Reference Processing:
no references
[9.334s][debug  ][gc,ref         ] GC(2) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[9.334s][debug  ][gc,phases,ref  ] GC(2) Reference Processing: 0.1ms
[9.334s][debug  ][gc,phases,ref  ] GC(2)   Reconsider SoftReferences: 0.0ms
[9.334s][debug  ][gc,phases,ref  ] GC(2)     SoftRef (ms):
skipped
[9.334s][debug  ][gc,phases,ref  ] GC(2)   Notify Soft/WeakReferences: 0.0ms
[9.334s][debug  ][gc,phases,ref  ] GC(2)     SoftRef (ms):                 Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[9.334s][debug  ][gc,phases,ref  ] GC(2)     WeakRef (ms):                 Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[9.334s][debug  ][gc,phases,ref  ] GC(2)     FinalRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[9.334s][debug  ][gc,phases,ref  ] GC(2)     Total (ms):                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[9.334s][debug  ][gc,phases,ref  ] GC(2)   Notify and keep alive finalizable:
0.0ms
[9.334s][debug  ][gc,phases,ref  ] GC(2)     FinalRef (ms):
skipped
[9.334s][debug  ][gc,phases,ref  ] GC(2)   Notify PhantomReferences: 0.0ms
[9.334s][debug  ][gc,phases,ref  ] GC(2)     PhantomRef (ms):              Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[9.334s][debug  ][gc,phases,ref  ] GC(2)   SoftReference:
[9.334s][debug  ][gc,phases,ref  ] GC(2)     Discovered: 0
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[9.334s][debug  ][gc,phases,ref ] GC(2)      Cleared: 0
[9.334s][debug  ][gc,phases,ref ] GC(2)      WeakReference:
[9.334s][debug  ][gc,phases,ref ] GC(2)        Discovered: 103
[9.334s][debug  ][gc,phases,ref ] GC(2)        Cleared: 103
[9.334s][debug  ][gc,phases,ref ] GC(2)      FinalReference:
[9.334s][debug  ][gc,phases,ref ] GC(2)        Discovered: 0
[9.335s][debug  ][gc,phases,ref ] GC(2)        Cleared: 0
[9.335s][debug  ][gc,phases,ref ] GC(2)      PhantomReference:
[9.335s][debug  ][gc,phases,ref ] GC(2)        Discovered: 5
[9.335s][debug  ][gc,phases,ref ] GC(2)        Cleared: 5
[9.335s][debug  ][gc,phases      ] GC(2) Reference Processing 0.740ms
[9.335s][debug  ][gc,phases,start] GC(2) Weak Processing
[9.335s][debug  ][gc,phases      ] GC(2)   VM Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   ObjectSynchronizer Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   JVMTI Tag Weak OopStorage    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   StringTable Weak             Min:
0.1, Avg:  0.1, Max:  0.1, Diff:  0.0, Sum:  0.4, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
512, Avg: 891.8, Max: 1344, Diff: 832, Sum: 5351, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   ResolvedMethodTable Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   JNI Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   StringDedup Table Weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Dead                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)     Total                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug  ][gc,phases      ] GC(2)   StringDedup Requests0 Weak   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
```

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[9.335s][debug ][gc,phases    ] GC(2)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    Dead                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2)    Total                       Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[9.335s][debug ][gc,phases    ] GC(2) Weak Processing 0.869ms
[9.336s][debug ][gc,ergo      ] GC(2) AdaptiveSizeStart:  collection: 3
[9.336s][debug ][gc,age       ] GC(2) Desired survivor size 33554432 bytes,
new threshold 7 (max threshold 15)
[9.336s][debug ][gc,ergo      ] GC(2)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.003984
major_cost: 0.000000 mutator_cost: 0.996016 throughput_goal: 0.990000
[9.336s][debug ][gc,ergo      ] GC(2) Live_space: 301730880 free_space:
402653184
[9.336s][debug ][gc,ergo      ] GC(2) Old eden_size: 201326592
desired_eden_size: 201326592
[9.336s][debug ][gc,ergo      ] GC(2) AdaptiveSizeStop: collection: 3
[9.336s][info  ][gc,heap      ] GC(2) PSYoungGen: 228800K(229376K)-
>32536K(229376K) Eden: 196312K(196608K)->0K(196608K) From: 32488K(32768K)-
>32536K(32768K)
[9.336s][info  ][gc,heap      ] GC(2) ParOldGen: 80913K(262144K)-
>107537K(262144K)
[9.336s][info  ][gc,metaspace ] GC(2) Metaspace: 1022K(1216K)->1022K(1216K)
NonClass: 939K(1024K)->939K(1024K) Class: 83K(192K)->83K(192K)
[9.336s][info  ][gc          ] GC(2) Pause Young (Allocation Failure) 302M-
>136M(480M) 8.503ms
[9.336s][info  ][gc,cpu       ] GC(2) User=0.02s Sys=0.00s Real=0.01s
[9.336s][debug ][gc,heap      ] GC(2) Heap after GC invocations=3 (full 0):
[9.336s][debug ][gc,heap      ] GC(2)  PSYoungGen      total 229376K, used
32536K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[9.336s][debug ][gc,heap      ] GC(2)   eden space 196608K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fc000000)
[9.336s][debug ][gc,heap      ] GC(2)   from space 32768K, 99% used
[0x00000000fc000000,0x00000000fdfc6210,0x00000000fe000000)
[9.336s][debug ][gc,heap      ] GC(2)   to   space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[9.336s][debug ][gc,heap      ] GC(2)  ParOldGen       total 262144K, used
107537K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[9.336s][debug ][gc,heap      ] GC(2)   object space 262144K, 41% used
[0x00000000c0000000,0x00000000c6904690,0x00000000d0000000)
[9.336s][debug ][gc,heap      ] GC(2)  Metaspace       used 1022K, committed
1216K, reserved 1056768K
[9.336s][debug ][gc,heap      ] GC(2)   class space    used 83K, committed
192K, reserved 1048576K
[9.336s][debug ][gc,task,time ] GC(2) VM-Thread 93268426 93338621 93361189
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[12.479s][debug  ][gc,heap          ] GC(3) Heap before GC invocations=4 (full 0):
[12.479s][debug  ][gc,heap          ] GC(3) PSYoungGen      total 229376K, used
228890K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[12.479s][debug  ][gc,heap          ] GC(3)   eden space 196608K, 99% used
[0x00000000f0000000,0x00000000fbfc09e0,0x00000000fc000000)
[12.479s][debug  ][gc,heap          ] GC(3)   from space 32768K, 99% used
[0x00000000fc000000,0x00000000fdfc6210,0x00000000fe000000)
[12.479s][debug  ][gc,heap          ] GC(3)   to   space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[12.479s][debug  ][gc,heap          ] GC(3) ParOldGen       total 262144K, used
107537K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[12.479s][debug  ][gc,heap          ] GC(3)   object space 262144K, 41% used
[0x00000000c0000000,0x00000000c6904690,0x00000000d0000000)
[12.479s][debug  ][gc,heap          ] GC(3) Metaspace       used 1023K, committed
1216K, reserved 1056768K
[12.479s][debug  ][gc,heap          ] GC(3)   class space    used 83K, committed
192K, reserved 1048576K
[12.479s][debug  ][gc,tlab          ] GC(3) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 187 max 187 waste: 15.7% gc: 783568B max: 783568B slow: 0B max: 0B
[12.479s][info   ][gc,start         ] GC(3) Pause Young (Allocation Failure)
[12.479s][debug  ][gc,phases,start] GC(3) Scavenge
[12.485s][debug  ][gc,phases       ] GC(3) Scavenge 5.446ms
[12.485s][debug  ][gc,phases,start] GC(3) Reference Processing
[12.485s][debug  ][gc,ref          ] GC(3) Skipped phase 1 of Reference
Processing: no references
[12.485s][debug  ][gc,ref          ] GC(3) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[12.485s][debug  ][gc,ref          ] GC(3) Skipped phase 3 of Reference
Processing: no references
[12.485s][debug  ][gc,ref          ] GC(3) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[12.485s][debug  ][gc,phases,ref ] GC(3) Reference Processing: 0.1ms
[12.485s][debug  ][gc,phases,ref ] GC(3)   Reconsider SoftReferences: 0.0ms
[12.485s][debug  ][gc,phases,ref ] GC(3)     SoftRef (ms):
skipped
[12.485s][debug  ][gc,phases,ref ] GC(3)   Notify Soft/WeakReferences: 0.0ms
[12.485s][debug  ][gc,phases,ref ] GC(3)     SoftRef (ms):              Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[12.485s][debug  ][gc,phases,ref ] GC(3)     WeakRef (ms):              Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[12.485s][debug  ][gc,phases,ref ] GC(3)     FinalRef (ms):             Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[12.485s][debug  ][gc,phases,ref ] GC(3)     Total (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[12.485s][debug  ][gc,phases,ref ] GC(3)   Notify and keep alive finalizable:
0.0ms
[12.485s][debug  ][gc,phases,ref ] GC(3)     FinalRef (ms):
skipped
[12.485s][debug  ][gc,phases,ref ] GC(3)   Notify PhantomReferences: 0.0ms
[12.485s][debug  ][gc,phases,ref ] GC(3)     PhantomRef (ms):           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[12.485s][debug  ][gc,phases,ref ] GC(3)   SoftReference:
[12.485s][debug  ][gc,phases,ref ] GC(3)     Discovered: 0
[12.485s][debug  ][gc,phases,ref ] GC(3)     Cleared: 0
[12.485s][debug  ][gc,phases,ref ] GC(3)   WeakReference:
[12.485s][debug  ][gc,phases,ref ] GC(3)     Discovered: 103
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[12.485s][debug  ][gc,phases,ref  ] GC(3)       Cleared: 103
[12.485s][debug  ][gc,phases,ref  ] GC(3)     FinalReference:
[12.485s][debug  ][gc,phases,ref  ] GC(3)       Discovered: 0
[12.485s][debug  ][gc,phases,ref  ] GC(3)       Cleared: 0
[12.485s][debug  ][gc,phases,ref  ] GC(3)     PhantomReference:
[12.485s][debug  ][gc,phases,ref  ] GC(3)       Discovered: 5
[12.486s][debug  ][gc,phases,ref  ] GC(3)       Cleared: 5
[12.486s][debug  ][gc,phases      ] GC(3) Reference Processing 0.749ms
[12.486s][debug  ][gc,phases,start] GC(3) Weak Processing
[12.486s][debug  ][gc,phases      ] GC(3)   VM Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   ObjectSynchronizer Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   JVMTI Tag Weak OopStorage    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   StringTable Weak            Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.2, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
704, Avg: 891.8, Max: 1280, Diff: 576, Sum: 5351, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   ResolvedMethodTable Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   JNI Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   StringDedup Table Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)   StringDedup Requests0 Weak   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[12.486s][debug  ][gc,phases      ] GC(3)      Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)      StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)      Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)      Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)      Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)      Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3)      Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[12.486s][debug  ][gc,phases      ] GC(3) Weak Processing 0.850ms
[12.486s][debug  ][gc,ergo        ] GC(3) AdaptiveSizeStart:  collection: 4
[12.486s][debug  ][gc,age         ] GC(3) Desired survivor size 33554432 bytes,
new threshold 7 (max threshold 15)
[12.486s][debug  ][gc,ergo        ] GC(3)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.003560
major_cost: 0.000000 mutator_cost: 0.996440 throughput_goal: 0.990000
[12.487s][debug  ][gc,ergo        ] GC(3) Live_space: 301732288 free_space:
402653184
[12.487s][debug  ][gc,ergo        ] GC(3) Old eden_size: 201326592
desired_eden_size: 201326592
[12.487s][debug  ][gc,ergo        ] GC(3) AdaptiveSizeStop: collection: 4
[12.487s][info   ][gc,heap        ] GC(3) PSYoungGen: 228890K(229376K)-
>32520K(229376K) Eden: 196354K(196608K)->0K(196608K) From: 32536K(32768K)-
>32520K(32768K)
[12.487s][info   ][gc,heap        ] GC(3) ParOldGen: 107537K(262144K)-
>124945K(262144K)
[12.487s][info   ][gc,metaspace   ] GC(3) Metaspace: 1023K(1216K)->1023K(1216K)
NonClass: 939K(1024K)->939K(1024K) Class: 83K(192K)->83K(192K)
[12.487s][info   ][gc             ] GC(3) Pause Young (Allocation Failure) 328M-
>153M(480M) 7.504ms
[12.487s][info   ][gc,cpu         ] GC(3) User=0.00s Sys=0.00s Real=0.01s
[12.487s][debug  ][gc,heap        ] GC(3) Heap after GC invocations=4 (full 0):
[12.487s][debug  ][gc,heap        ] GC(3)  PSYoungGen      total 229376K, used
32520K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[12.487s][debug  ][gc,heap        ] GC(3)   eden space 196608K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fc000000)
[12.487s][debug  ][gc,heap        ] GC(3)   from space 32768K, 99% used
[0x00000000fe000000,0x00000000fffc2200,0x0000000100000000)
[12.487s][debug  ][gc,heap        ] GC(3)   to   space 32768K, 0% used
[0x00000000fc000000,0x00000000fc000000,0x00000000fe000000)
[12.487s][debug  ][gc,heap        ] GC(3)  ParOldGen       total 262144K, used
124945K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[12.487s][debug  ][gc,heap        ] GC(3)   object space 262144K, 47% used
[0x00000000c0000000,0x00000000c7a047a0,0x00000000d0000000)
[12.487s][debug  ][gc,heap        ] GC(3)  Metaspace       used 1023K, committed
1216K, reserved 1056768K
[12.487s][debug  ][gc,heap        ] GC(3)   class space    used 83K, committed
192K, reserved 1048576K
[12.487s][debug  ][gc,task,time   ] GC(3) VM-Thread 124787673 124847883 124869595
[15.624s][debug  ][gc,heap        ] GC(4) Heap before GC invocations=5 (full 0):
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[15.624s][debug  ][gc,heap         ] GC(4)  PSYoungGen      total 229376K, used
228902K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[15.624s][debug  ][gc,heap         ] GC(4)   eden space 196608K, 99% used
[0x00000000f0000000,0x00000000fbfc7618,0x00000000fc000000)
[15.624s][debug  ][gc,heap         ] GC(4)   from space 32768K, 99% used
[0x00000000fe000000,0x00000000fffc2200,0x0000000100000000)
[15.624s][debug  ][gc,heap         ] GC(4)   to   space 32768K, 0% used
[0x00000000fc000000,0x00000000fc000000,0x00000000fe000000)
[15.624s][debug  ][gc,heap         ] GC(4)  ParOldGen       total 262144K, used
124945K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[15.624s][debug  ][gc,heap         ] GC(4)   object space 262144K, 47% used
[0x00000000c0000000,0x00000000c7a047a0,0x00000000d0000000)
[15.624s][debug  ][gc,heap         ] GC(4)  Metaspace       used 1024K, committed
1216K, reserved 1056768K
[15.624s][debug  ][gc,heap         ] GC(4)   class space    used 83K, committed
192K, reserved 1048576K
[15.624s][debug  ][gc,tlab         ] GC(4) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 187 max 187 waste: 16.2% gc: 811272B max: 811272B slow: 0B max: 0B
[15.624s][info   ][gc,start        ] GC(4) Pause Young (Allocation Failure)
[15.624s][debug  ][gc,phases,start] GC(4) Scavenge
[15.629s][debug  ][gc,phases       ] GC(4) Scavenge 4.370ms
[15.629s][debug  ][gc,phases,start] GC(4) Reference Processing
[15.629s][debug  ][gc,ref          ] GC(4) Skipped phase 1 of Reference
Processing: no references
[15.629s][debug  ][gc,ref          ] GC(4) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[15.629s][debug  ][gc,ref          ] GC(4) Skipped phase 3 of Reference
Processing: no references
[15.629s][debug  ][gc,ref          ] GC(4) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[15.629s][debug  ][gc,phases,ref ] GC(4) Reference Processing: 0.1ms
[15.629s][debug  ][gc,phases,ref ] GC(4)   Reconsider SoftReferences: 0.0ms
[15.629s][debug  ][gc,phases,ref ] GC(4)     SoftRef (ms):
skipped
[15.629s][debug  ][gc,phases,ref ] GC(4)   Notify Soft/WeakReferences: 0.0ms
[15.629s][debug  ][gc,phases,ref ] GC(4)     SoftRef (ms):                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[15.629s][debug  ][gc,phases,ref ] GC(4)     WeakRef (ms):                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[15.629s][debug  ][gc,phases,ref ] GC(4)     FinalRef (ms):                  Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[15.629s][debug  ][gc,phases,ref ] GC(4)     Total (ms):                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[15.629s][debug  ][gc,phases,ref ] GC(4)   Notify and keep alive finalizable:
0.0ms
[15.629s][debug  ][gc,phases,ref ] GC(4)     FinalRef (ms):
skipped
[15.629s][debug  ][gc,phases,ref ] GC(4)   Notify PhantomReferences: 0.0ms
[15.629s][debug  ][gc,phases,ref ] GC(4)     PhantomRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[15.629s][debug  ][gc,phases,ref ] GC(4)   SoftReference:
[15.629s][debug  ][gc,phases,ref ] GC(4)     Discovered: 0
[15.629s][debug  ][gc,phases,ref ] GC(4)     Cleared: 0
[15.629s][debug  ][gc,phases,ref ] GC(4)   WeakReference:
[15.629s][debug  ][gc,phases,ref ] GC(4)     Discovered: 103
[15.629s][debug  ][gc,phases,ref ] GC(4)     Cleared: 103
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[15.629s][debug  ][gc,phases,ref ] GC(4)     FinalReference:
[15.629s][debug  ][gc,phases,ref ] GC(4)       Discovered: 0
[15.629s][debug  ][gc,phases,ref ] GC(4)       Cleared: 0
[15.629s][debug  ][gc,phases,ref ] GC(4)     PhantomReference:
[15.630s][debug  ][gc,phases,ref ] GC(4)       Discovered: 5
[15.630s][debug  ][gc,phases,ref ] GC(4)       Cleared: 5
[15.630s][debug  ][gc,phases     ] GC(4) Reference Processing 0.725ms
[15.630s][debug  ][gc,phases,start] GC(4) Weak Processing
[15.630s][debug  ][gc,phases     ] GC(4)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   ObjectSynchronizer Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   JVMTI Tag Weak OopStorage   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   StringTable Weak           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.2, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
576, Avg: 891.8, Max: 1280, Diff: 704, Sum: 5351, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   ResolvedMethodTable weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   JNI Weak                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   StringDedup Table weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)   StringDedup Requests0 weak  Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases     ] GC(4)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[15.630s][debug  ][gc,phases      ] GC(4)     StringDedup Requests1 Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases      ] GC(4)     Dead                            Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases      ] GC(4)     Total                           Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases      ] GC(4)     Weak JFR Old Object Samples     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[15.630s][debug  ][gc,phases      ] GC(4)     Dead                            Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases      ] GC(4)     Total                           Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[15.630s][debug  ][gc,phases      ] GC(4) Weak Processing 0.834ms
[15.630s][debug  ][gc,ergo        ] GC(4) AdaptiveSizeStart:  collection: 5
[15.630s][debug  ][gc,ergo        ] GC(4) avg_survived_padded_avg:
33347368.000000
[15.630s][debug  ][gc,ergo        ] GC(4) avg_promoted_padded_avg:
55638472.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 6
target_size: 33554432
[15.631s][debug  ][gc,age         ] GC(4) Desired survivor size 33554432 bytes,
new threshold 6 (max threshold 15)
[15.631s][debug  ][gc,ergo        ] GC(4)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.003154
major_cost: 0.000000 mutator_cost: 0.996846 throughput_goal: 0.990000
[15.631s][debug  ][gc,ergo        ] GC(4) Live_space: 301739648 free_space:
402653184
[15.631s][debug  ][gc,ergo        ] GC(4) Old eden_size: 201326592
desired_eden_size: 196608000
[15.631s][debug  ][gc,ergo        ] GC(4) AdaptiveSizeStop: collection: 5
[15.631s][info   ][gc,heap        ] GC(4) PSYoungGen: 228902K(229376K)-
>32552K(229376K) Eden: 196381K(196608K)->0K(196608K) From: 32520K(32768K)-
>32552K(32768K)
[15.631s][info   ][gc,heap        ] GC(4) ParOldGen: 124945K(262144K)-
>133138K(262144K)
[15.631s][info   ][gc,metaspace   ] GC(4) Metaspace: 1024K(1216K)->1024K(1216K)
NonClass: 941K(1024K)->941K(1024K) Class: 83K(192K)->83K(192K)
[15.631s][info   ][gc             ] GC(4) Pause Young (Allocation Failure) 345M-
>161M(480M) 6.434ms
[15.631s][info   ][gc,cpu         ] GC(4) User=0.00s Sys=0.00s Real=0.01s
[15.631s][debug  ][gc,heap        ] GC(4) Heap after GC invocations=5 (full 0):
[15.631s][debug  ][gc,heap        ] GC(4)  PSYoungGen      total 229376K, used
32552K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[15.631s][debug  ][gc,heap        ] GC(4)   eden space 196608K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fc000000)
[15.631s][debug  ][gc,heap        ] GC(4)   from space 32768K, 99% used
[0x00000000fc000000,0x00000000fdfca200,0x00000000fe000000)
[15.631s][debug  ][gc,heap        ] GC(4)   to   space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[15.631s][debug  ][gc,heap        ] GC(4)  ParOldGen       total 262144K, used
133138K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[15.631s][debug  ][gc,heap        ] GC(4)   object space 262144K, 50% used
[0x00000000c0000000,0x00000000c8204820,0x00000000d0000000)
[15.631s][debug  ][gc,heap        ] GC(4)  Metaspace       used 1024K, committed
1216K, reserved 1056768K
[15.631s][debug  ][gc,heap        ] GC(4)   class space    used 83K, committed
192K, reserved 1048576K
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[15.631s][debug  ][gc,task,time    ] GC(4) VM-Thread 156238439 156288253 156310078
[18.793s][debug  ][gc,heap         ] GC(5) Heap before GC invocations=6 (full 0):
[18.793s][debug  ][gc,heap         ] GC(5) PSYoungGen      total 229376K, used
228951K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[18.793s][debug  ][gc,heap         ] GC(5)   eden space 196608K, 99% used
[0x00000000f0000000,0x00000000fbfcbbb0,0x00000000fc000000)
[18.793s][debug  ][gc,heap         ] GC(5)   from space 32768K, 99% used
[0x00000000fc000000,0x00000000fdfca200,0x00000000fe000000)
[18.793s][debug  ][gc,heap         ] GC(5)   to   space 32768K, 0% used
[0x00000000fe000000,0x00000000fe000000,0x0000000100000000)
[18.793s][debug  ][gc,heap         ] GC(5)  ParOldGen      total 262144K, used
133138K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[18.793s][debug  ][gc,heap         ] GC(5)   object space 262144K, 50% used
[0x00000000c0000000,0x00000000c8204820,0x00000000d0000000)
[18.793s][debug  ][gc,heap         ] GC(5)  Metaspace       used 1024K, committed
1216K, reserved 1056768K
[18.793s][debug  ][gc,heap         ] GC(5)   class space    used 83K, committed
192K, reserved 1048576K
[18.793s][debug  ][gc,tlab         ] GC(5) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 187 max 187 waste: 16.5% gc: 829296B max: 829296B slow: 0B max: 0B
[18.793s][info   ][gc,start        ] GC(5) Pause Young (Allocation Failure)
[18.793s][debug  ][gc,phases,start] GC(5) Scavenge
[18.796s][debug  ][gc,phases       ] GC(5) Scavenge 3.040ms
[18.796s][debug  ][gc,phases,start] GC(5) Reference Processing
[18.796s][debug  ][gc,ref          ] GC(5) Skipped phase 1 of Reference
Processing: no references
[18.796s][debug  ][gc,ref          ] GC(5) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[18.796s][debug  ][gc,ref          ] GC(5) Skipped phase 3 of Reference
Processing: no references
[18.796s][debug  ][gc,ref          ] GC(5) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[18.796s][debug  ][gc,phases,ref ] GC(5) Reference Processing: 0.1ms
[18.796s][debug  ][gc,phases,ref ] GC(5)   Reconsider SoftReferences: 0.0ms
[18.796s][debug  ][gc,phases,ref ] GC(5)     SoftRef (ms):
skipped
[18.796s][debug  ][gc,phases,ref ] GC(5)   Notify Soft/WeakReferences: 0.0ms
[18.796s][debug  ][gc,phases,ref ] GC(5)     SoftRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[18.796s][debug  ][gc,phases,ref ] GC(5)     WeakRef (ms):                Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[18.796s][debug  ][gc,phases,ref ] GC(5)     FinalRef (ms):               Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[18.797s][debug  ][gc,phases,ref ] GC(5)     Total (ms):                  Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[18.797s][debug  ][gc,phases,ref ] GC(5)   Notify and keep alive finalizable:
0.0ms
[18.797s][debug  ][gc,phases,ref ] GC(5)     FinalRef (ms):
skipped
[18.797s][debug  ][gc,phases,ref ] GC(5)   Notify PhantomReferences: 0.0ms
[18.797s][debug  ][gc,phases,ref ] GC(5)     PhantomRef (ms):             Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[18.797s][debug  ][gc,phases,ref ] GC(5)   SoftReference:
[18.797s][debug  ][gc,phases,ref ] GC(5)     Discovered: 0
[18.797s][debug  ][gc,phases,ref ] GC(5)     Cleared: 0
[18.797s][debug  ][gc,phases,ref ] GC(5)   WeakReference:
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[18.797s][debug  ][gc,phases,ref  ] GC(5)       Discovered: 91
[18.797s][debug  ][gc,phases,ref  ] GC(5)       Cleared: 91
[18.797s][debug  ][gc,phases,ref  ] GC(5)     FinalReference:
[18.797s][debug  ][gc,phases,ref  ] GC(5)       Discovered: 0
[18.797s][debug  ][gc,phases,ref  ] GC(5)       Cleared: 0
[18.797s][debug  ][gc,phases,ref  ] GC(5)     PhantomReference:
[18.797s][debug  ][gc,phases,ref  ] GC(5)       Discovered: 4
[18.797s][debug  ][gc,phases,ref  ] GC(5)       Cleared: 4
[18.797s][debug  ][gc,phases      ] GC(5) Reference Processing 0.714ms
[18.797s][debug  ][gc,phases,start] GC(5) Weak Processing
[18.797s][debug  ][gc,phases      ] GC(5)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Total                     Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)   ObjectSynchronizer Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Total                     Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)   JVMTI Tag Weak OopStorage   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)   StringTable Weak            Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.2, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Total                     Min:
640, Avg: 891.8, Max: 1088, Diff: 448, Sum: 5351, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)   ResolvedMethodTable Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Total                     Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)   JNI Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)   StringDedup Table Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.797s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)   StringDedup Requests0 Weak  Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[18.798s][debug  ][gc,phases      ] GC(5)     Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5)     Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[18.798s][debug  ][gc,phases      ] GC(5) Weak Processing 0.843ms
[18.798s][debug  ][gc,ergo        ] GC(5) AdaptiveSizeStart:  collection: 6
[18.798s][debug  ][gc,ergo        ] GC(5) avg_survived_padded_avg:
33604232.000000
[18.798s][debug  ][gc,ergo        ] GC(5) avg_promoted_padded_avg:
51271272.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 5
target_size: 34078720
[18.798s][debug  ][gc,age         ] GC(5) Desired survivor size 34078720 bytes,
new threshold 5 (max threshold 15)
[18.798s][debug  ][gc,ergo        ] GC(5)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002738
major_cost: 0.000000 mutator_cost: 0.997262 throughput_goal: 0.990000
[18.798s][debug  ][gc,ergo        ] GC(5) Live_space: 301566144 free_space:
397934592
[18.798s][debug  ][gc,ergo        ] GC(5) Old eden_size: 196608000
desired_eden_size: 196608000
[18.798s][debug  ][gc,ergo        ] GC(5) AdaptiveSizeStop: collection: 6
[18.798s][info   ][gc,heap        ] GC(5) PSYoungGen: 228951K(229376K)-
>31464K(228352K) Eden: 196398K(196608K)->0K(195584K) From: 32552K(32768K)-
>31464K(32768K)
[18.798s][info   ][gc,heap        ] GC(5) ParOldGen: 133138K(262144K)-
>133138K(262144K)
[18.798s][info   ][gc,metaspace   ] GC(5) Metaspace: 1024K(1216K)->1024K(1216K)
NonClass: 941K(1024K)->941K(1024K) Class: 83K(192K)->83K(192K)
[18.798s][info   ][gc             ] GC(5) Pause Young (Allocation Failure) 353M-
>160M(479M) 5.049ms
[18.798s][info   ][gc,cpu         ] GC(5) User=0.00s Sys=0.00s Real=0.00s
[18.798s][debug  ][gc,heap        ] GC(5) Heap after GC invocations=6 (full 0):
[18.798s][debug  ][gc,heap        ] GC(5)  PSYoungGen      total 228352K, used
31464K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[18.798s][debug  ][gc,heap        ] GC(5)   eden space 195584K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fbf00000)
[18.798s][debug  ][gc,heap        ] GC(5)   from space 32768K, 96% used
[0x00000000fe000000,0x00000000ffeba1f0,0x0000000100000000)
[18.798s][debug  ][gc,heap        ] GC(5)   to   space 33280K, 0% used
[0x00000000fbf00000,0x00000000fbf00000,0x00000000fdf80000)
[18.798s][debug  ][gc,heap        ] GC(5)  ParOldGen       total 262144K, used
133138K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[18.798s][debug  ][gc,heap        ] GC(5)   object space 262144K, 50% used
[0x00000000c0000000,0x00000000c8204820,0x00000000d0000000)
[18.798s][debug  ][gc,heap        ] GC(5)  Metaspace       used 1024K, committed
1216K, reserved 1056768K
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[18.798s][debug  ][gc,heap       ] GC(5)    class space     used 83K, committed
192K, reserved 1048576K
[18.798s][debug  ][gc,task,time  ] GC(5) VM-Thread 187926446 187961775 187984401
[21.927s][debug  ][gc,heap       ] GC(6) Heap before GC invocations=7 (full 0):
[21.927s][debug  ][gc,heap       ] GC(6) PSYoungGen      total 228352K, used
226830K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[21.927s][debug  ][gc,heap       ] GC(6)    eden space 195584K, 99% used
[0x00000000f0000000,0x00000000fbec9738,0x00000000fbf00000)
[21.927s][debug  ][gc,heap       ] GC(6)    from space 32768K, 96% used
[0x00000000fe000000,0x00000000ffeba1f0,0x0000000100000000)
[21.928s][debug  ][gc,heap       ] GC(6)    to   space 33280K, 0% used
[0x00000000fbf00000,0x00000000fbf00000,0x00000000fdf80000)
[21.928s][debug  ][gc,heap       ] GC(6) ParOldGen       total 262144K, used
133138K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[21.928s][debug  ][gc,heap       ] GC(6)    object space 262144K, 50% used
[0x00000000c0000000,0x00000000c8204820,0x00000000d0000000)
[21.928s][debug  ][gc,heap       ] GC(6) Metaspace       used 1025K, committed
1216K, reserved 1056768K
[21.928s][debug  ][gc,heap       ] GC(6)    class space     used 83K, committed
192K, reserved 1048576K
[21.928s][debug  ][gc,tlab       ] GC(6) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 186 max 186 waste: 16.3% gc: 819976B max: 819976B slow: 0B max: 0B
[21.928s][info   ][gc,start      ] GC(6) Pause Young (Allocation Failure)
[21.928s][debug  ][gc,phases,start] GC(6) Scavenge
[21.930s][debug  ][gc,phases      ] GC(6) Scavenge 2.293ms
[21.930s][debug  ][gc,phases,start] GC(6) Reference Processing
[21.930s][debug  ][gc,ref        ] GC(6) Skipped phase 1 of Reference
Processing: no references
[21.930s][debug  ][gc,ref        ] GC(6) Skipped phase 2 of Reference
Processing: no references
[21.930s][debug  ][gc,ref        ] GC(6) Skipped phase 3 of Reference
Processing: no references
[21.930s][debug  ][gc,ref        ] GC(6) Skipped phase 4 of Reference
Processing: no references
[21.930s][debug  ][gc,phases,ref ] GC(6) Reference Processing: 0.1ms
[21.930s][debug  ][gc,phases,ref ] GC(6)   Reconsider SoftReferences: 0.0ms
[21.930s][debug  ][gc,phases,ref ] GC(6)     SoftRef (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)   Notify Soft/WeakReferences: 0.0ms
[21.930s][debug  ][gc,phases,ref ] GC(6)     SoftRef (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)     WeakRef (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)     FinalRef (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)     Total (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)   Notify and keep alive finalizable:
0.0ms
[21.930s][debug  ][gc,phases,ref ] GC(6)     FinalRef (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)   Notify PhantomReferences: 0.0ms
[21.930s][debug  ][gc,phases,ref ] GC(6)     PhantomRef (ms):
skipped
[21.930s][debug  ][gc,phases,ref ] GC(6)   SoftReference:
[21.931s][debug  ][gc,phases,ref ] GC(6)     Discovered: 0
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[21.931s][debug  ][gc,phases,ref  ] GC(6)     Cleared: 0
[21.931s][debug  ][gc,phases,ref  ] GC(6)     WeakReference:
[21.931s][debug  ][gc,phases,ref  ] GC(6)       Discovered: 0
[21.931s][debug  ][gc,phases,ref  ] GC(6)       Cleared: 0
[21.931s][debug  ][gc,phases,ref  ] GC(6)     FinalReference:
[21.931s][debug  ][gc,phases,ref  ] GC(6)       Discovered: 0
[21.931s][debug  ][gc,phases,ref  ] GC(6)       Cleared: 0
[21.931s][debug  ][gc,phases,ref  ] GC(6)     PhantomReference:
[21.931s][debug  ][gc,phases,ref  ] GC(6)       Discovered: 0
[21.931s][debug  ][gc,phases,ref  ] GC(6)       Cleared: 0
[21.931s][debug  ][gc,phases       ] GC(6) Reference Processing 0.681ms
[21.931s][debug  ][gc,phases,start] GC(6) Weak Processing
[21.931s][debug  ][gc,phases       ] GC(6)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)   ObjectSynchronizer Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)   JVMTI Tag Weak OopStorage   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)   StringTable Weak           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.1, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
704, Avg: 891.8, Max: 999, Diff: 295, Sum: 5351, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)   ResolvedMethodTable Weak   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)   JNI Weak                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)   StringDedup Table Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.931s][debug  ][gc,phases       ] GC(6)     Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases       ] GC(6)   StringDedup Requests0 Weak Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
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[21.932s][debug  ][gc,phases      ] GC(6)      Dead                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)      Total                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)    StringDedup Requests1 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)      Dead                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)      Total                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)    Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)      Dead                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6)      Total                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[21.932s][debug  ][gc,phases      ] GC(6) Weak Processing 0.942ms
[21.932s][debug  ][gc,ergo        ] GC(6) AdaptiveSizeStart:  collection: 7
[21.932s][debug  ][gc,ergo        ] GC(6) avg_survived_padded_avg:
36459416.000000
[21.932s][debug  ][gc,ergo        ] GC(6) avg_promoted_padded_avg:
51996916.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 4
target_size: 36700160
[21.932s][debug  ][gc,age         ] GC(6) Desired survivor size 36700160 bytes,
new threshold 4 (max threshold 15)
[21.932s][debug  ][gc,ergo        ] GC(6)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002376
major_cost: 0.000000 mutator_cost: 0.997624 throughput_goal: 0.990000
[21.932s][debug  ][gc,ergo        ] GC(6) Live_space: 299717088 free_space:
397934592
[21.932s][debug  ][gc,ergo        ] GC(6) Old eden_size: 196608000
desired_eden_size: 195559424
[21.932s][debug  ][gc,ergo        ] GC(6) AdaptiveSizeStop: collection: 7
[21.932s][info   ][gc,heap        ] GC(6) PSYoungGen: 226830K(228352K)-
>19456K(210944K) Eden: 195365K(195584K)->0K(190976K) From: 31464K(32768K)-
>19456K(19968K)
[21.932s][info   ][gc,heap        ] GC(6) ParOldGen: 133138K(262144K)-
>134806K(262144K)
[21.932s][info   ][gc,metaspace   ] GC(6) Metaspace: 1025K(1216K)->1025K(1216K)
NonClass: 941K(1024K)->941K(1024K) Class: 83K(192K)->83K(192K)
[21.932s][info   ][gc             ] GC(6) Pause Young (Allocation Failure) 351M-
>150M(462M) 4.371ms
[21.932s][info   ][gc,cpu         ] GC(6) User=0.16s Sys=0.00s Real=0.01s
[21.932s][debug  ][gc,heap        ] GC(6) Heap after GC invocations=7 (full 0):
[21.932s][debug  ][gc,heap        ] GC(6)  PSYoungGen      total 210944K, used
19456K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[21.932s][debug  ][gc,heap        ] GC(6)   eden space 190976K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fba80000)
[21.932s][debug  ][gc,heap        ] GC(6)   from space 19968K, 97% used
[0x00000000fbf00000,0x00000000fd200130,0x00000000fd280000)
[21.932s][debug  ][gc,heap        ] GC(6)   to   space 35840K, 0% used
[0x00000000fdd00000,0x00000000fdd00000,0x0000000100000000)
[21.932s][debug  ][gc,heap        ] GC(6)  ParOldGen      total 262144K, used
134806K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[21.932s][debug  ][gc,heap        ] GC(6)   object space 262144K, 51% used
[0x00000000c0000000,0x00000000c83a5998,0x00000000d0000000)
```

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[21.932s][debug  ][gc,heap       ] GC(6)  Metaspace        used 1025K, committed
1216K, reserved 1056768K
[21.932s][debug  ][gc,heap       ] GC(6)   class space     used 83K, committed
192K, reserved 1048576K
[21.932s][debug  ][gc,task,time  ] GC(6) VM-Thread 219273270 219300758 219323172
[24.961s][debug  ][gc,heap       ] GC(7) Heap before GC invocations=8 (full 0):
[24.962s][debug  ][gc,heap       ] GC(7)  PSYoungGen       total 210944K, used
209617K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[24.962s][debug  ][gc,heap       ] GC(7)   eden space 190976K, 99% used
[0x00000000f0000000,0x00000000fb9b4620,0x00000000fba80000)
[24.962s][debug  ][gc,heap       ] GC(7)   from space 19968K, 97% used
[0x00000000fbf00000,0x00000000fd200130,0x00000000fd280000)
[24.962s][debug  ][gc,heap       ] GC(7)   to   space 35840K, 0% used
[0x00000000fdd00000,0x00000000fdd00000,0x0000000100000000)
[24.962s][debug  ][gc,heap       ] GC(7)  ParOldGen        total 262144K, used
134806K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[24.962s][debug  ][gc,heap       ] GC(7)   object space 262144K, 51% used
[0x00000000c0000000,0x00000000c83a5998,0x00000000d0000000)
[24.962s][debug  ][gc,heap       ] GC(7)  Metaspace        used 1025K, committed
1216K, reserved 1056768K
[24.962s][debug  ][gc,heap       ] GC(7)   class space     used 83K, committed
192K, reserved 1048576K
[24.962s][debug  ][gc,tlab       ] GC(7) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 181 max 181 waste: 14.9% gc: 733760B max: 733760B slow: 0B max: 0B
[24.962s][info   ][gc,start      ] GC(7) Pause Young (Allocation Failure)
[24.962s][debug  ][gc,phases,start] GC(7) Scavenge
[24.963s][debug  ][gc,phases      ] GC(7) Scavenge 1.250ms
[24.963s][debug  ][gc,phases,start] GC(7) Reference Processing
[24.963s][debug  ][gc,ref         ] GC(7) Skipped phase 1 of Reference
Processing: no references
[24.963s][debug  ][gc,ref         ] GC(7) Skipped phase 2 of Reference
Processing: no references
[24.963s][debug  ][gc,ref         ] GC(7) Skipped phase 3 of Reference
Processing: no references
[24.963s][debug  ][gc,ref         ] GC(7) Skipped phase 4 of Reference
Processing: no references
[24.963s][debug  ][gc,phases,ref  ] GC(7) Reference Processing: 0.1ms
[24.964s][debug  ][gc,phases,ref  ] GC(7)   Reconsider SoftReferences: 0.0ms
[24.964s][debug  ][gc,phases,ref  ] GC(7)     SoftRef (ms):
skipped
[24.964s][debug  ][gc,phases,ref  ] GC(7)   Notify Soft/WeakReferences: 0.0ms
[24.964s][debug  ][gc,phases,ref  ] GC(7)     SoftRef (ms):
skipped
[24.964s][debug  ][gc,phases,ref  ] GC(7)     WeakRef (ms):
skipped
[24.964s][debug  ][gc,phases,ref  ] GC(7)     FinalRef (ms):
skipped
[24.964s][debug  ][gc,phases,ref  ] GC(7)     Total (ms):
skipped
[24.964s][debug  ][gc,phases,ref  ] GC(7)   Notify and keep alive finalizable:
0.0ms
[24.964s][debug  ][gc,phases,ref  ] GC(7)     FinalRef (ms):
skipped
[24.964s][debug  ][gc,phases,ref  ] GC(7)   Notify PhantomReferences: 0.0ms
[24.964s][debug  ][gc,phases,ref  ] GC(7)     PhantomRef (ms):
skipped
```

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[24.964s][debug  ][gc,phases,ref  ] GC(7)    SoftReference:
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Discovered: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Cleared: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)    WeakReference:
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Discovered: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Cleared: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)    FinalReference:
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Discovered: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Cleared: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)    PhantomReference:
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Discovered: 0
[24.964s][debug  ][gc,phases,ref  ] GC(7)      Cleared: 0
[24.964s][debug  ][gc,phases       ] GC(7) Reference Processing 0.783ms
[24.964s][debug  ][gc,phases,start] GC(7) Weak Processing
[24.964s][debug  ][gc,phases       ] GC(7)    VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Total                     Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)    ObjectSynchronizer Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Total                     Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)    JVMTI Tag Weak OopStorage   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)    StringTable Weak           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.964s][debug  ][gc,phases       ] GC(7)      Total                     Min:
743, Avg: 891.8, Max: 1024, Diff: 281, Sum: 5351, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)    ResolvedMethodTable weak   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)      Total                     Min:
0, Avg: 21.7, Max: 66, Diff: 66, Sum: 130, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)    JNI Weak                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)      Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)    StringDedup Table weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)      Dead                      Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases       ] GC(7)      Total                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[24.965s][debug  ][gc,phases      ] GC(7)    StringDedup Requests0 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)       Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)       Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)    StringDedup Requests1 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)       Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)       Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)     Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)       Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7)       Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[24.965s][debug  ][gc,phases      ] GC(7) Weak Processing 0.794ms
[24.965s][debug  ][gc,ergo        ] GC(7) AdaptiveSizeStart:  collection: 8
[24.965s][debug  ][gc,ergo        ] GC(7) avg_survived_padded_avg:
41168856.000000
[24.965s][debug  ][gc,ergo        ] GC(7) avg_promoted_padded_avg:
49602064.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 3
target_size: 41418752
[24.965s][debug  ][gc,age         ] GC(7) Desired survivor size 41418752 bytes,
new threshold 3 (max threshold 15)
[24.965s][debug  ][gc,ergo        ] GC(7)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002026
major_cost: 0.000000 mutator_cost: 0.997974 throughput_goal: 0.990000
[24.965s][debug  ][gc,ergo        ] GC(7) Live_space: 296466624 free_space:
396886016
[24.965s][debug  ][gc,ergo        ] GC(7) Old eden_size: 195559424
desired_eden_size: 190840832
[24.965s][debug  ][gc,ergo        ] GC(7) AdaptiveSizeStop: collection: 8
[24.965s][info   ][gc,heap        ] GC(7) PSYoungGen: 209617K(210944K)-
>4096K(217088K) Eden: 190161K(190976K)->0K(181248K) From: 19456K(19968K)-
>4096K(35840K)
[24.965s][info   ][gc,heap        ] GC(7) ParOldGen: 134806K(262144K)-
>134806K(262144K)
[24.965s][info   ][gc,metaspace   ] GC(7) Metaspace: 1025K(1216K)->1025K(1216K)
NonClass: 941K(1024K)->941K(1024K) Class: 83K(192K)->83K(192K)
[24.965s][info   ][gc             ] GC(7) Pause Young (Allocation Failure) 336M-
>135M(468M) 3.306ms
[24.965s][info   ][gc,cpu         ] GC(7) User=0.00s Sys=0.00s Real=0.00s
[24.965s][debug  ][gc,heap        ] GC(7) Heap after GC invocations=8 (full 0):
[24.965s][debug  ][gc,heap        ] GC(7)  PSYoungGen      total 217088K, used
4096K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[24.965s][debug  ][gc,heap        ] GC(7)   eden space 181248K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fb100000)
[24.965s][debug  ][gc,heap        ] GC(7)   from space 35840K, 11% used
[0x00000000fdd00000,0x00000000fe100040,0x0000000100000000)
[24.965s][debug  ][gc,heap        ] GC(7)   to   space 40448K, 0% used
[0x00000000fb100000,0x00000000fb100000,0x00000000fd880000)
[24.965s][debug  ][gc,heap        ] GC(7)  ParOldGen       total 262144K, used
134806K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
```

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[24.965s][debug  ][gc,heap      ] GC(7)   object space 262144K, 51% used
[0x00000000c0000000,0x00000000c83a5998,0x00000000d0000000)
[24.965s][debug  ][gc,heap      ] GC(7)   Metaspace       used 1025K, committed
1216K, reserved 1056768K
[24.966s][debug  ][gc,heap      ] GC(7)   class space   used 83K, committed
192K, reserved 1048576K
[24.966s][debug  ][gc,task,time ] GC(7) VM-Thread 249614205 249633436 249655320
[27.798s][debug  ][gc,heap      ] GC(8) Heap before GC invocations=9 (full 0):
[27.798s][debug  ][gc,heap      ] GC(8)   PSYoungGen     total 217088K, used
184853K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[27.798s][debug  ][gc,heap      ] GC(8)   eden space 181248K, 99% used
[0x00000000f0000000,0x00000000fb085460,0x00000000fb100000)
[27.798s][debug  ][gc,heap      ] GC(8)   from space 35840K, 11% used
[0x00000000fdd00000,0x00000000fe100040,0x0000000100000000)
[27.798s][debug  ][gc,heap      ] GC(8)   to  space 40448K, 0% used
[0x00000000fb100000,0x00000000fb100000,0x00000000fd880000)
[27.798s][debug  ][gc,heap      ] GC(8)   ParOldGen      total 262144K, used
134806K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[27.798s][debug  ][gc,heap      ] GC(8)   object space 262144K, 51% used
[0x00000000c0000000,0x00000000c83a5998,0x00000000d0000000)
[27.798s][debug  ][gc,heap      ] GC(8)   Metaspace       used 1025K, committed
1216K, reserved 1056768K
[27.798s][debug  ][gc,heap      ] GC(8)   class space   used 83K, committed
192K, reserved 1048576K
[27.798s][debug  ][gc,tlab      ] GC(8) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 172 max 172 waste: 11.4% gc: 542008B max: 542008B slow: 0B max: 0B
[27.798s][info   ][gc,start     ] GC(8) Pause Young (Allocation Failure)
[27.798s][debug  ][gc,phases,start] GC(8) Scavenge
[27.807s][debug  ][gc,phases    ] GC(8) Scavenge 8.970ms
[27.807s][debug  ][gc,phases,start] GC(8) Reference Processing
[27.807s][debug  ][gc,ref       ] GC(8) Skipped phase 1 of Reference
Processing: no references
[27.807s][debug  ][gc,ref       ] GC(8) Skipped phase 2 of Reference
Processing: no references
[27.807s][debug  ][gc,ref       ] GC(8) Skipped phase 3 of Reference
Processing: no references
[27.807s][debug  ][gc,ref       ] GC(8) Skipped phase 4 of Reference
Processing: no references
[27.807s][debug  ][gc,phases,ref ] GC(8) Reference Processing: 0.1ms
[27.807s][debug  ][gc,phases,ref ] GC(8)   Reconsider SoftReferences: 0.0ms
[27.807s][debug  ][gc,phases,ref ] GC(8)     SoftRef (ms):
skipped
[27.807s][debug  ][gc,phases,ref ] GC(8)   Notify Soft/WeakReferences: 0.0ms
[27.807s][debug  ][gc,phases,ref ] GC(8)     SoftRef (ms):
skipped
[27.807s][debug  ][gc,phases,ref ] GC(8)     WeakRef (ms):
skipped
[27.807s][debug  ][gc,phases,ref ] GC(8)     FinalRef (ms):
skipped
[27.807s][debug  ][gc,phases,ref ] GC(8)     Total (ms):
skipped
[27.807s][debug  ][gc,phases,ref ] GC(8)   Notify and keep alive finalizable:
0.0ms
[27.807s][debug  ][gc,phases,ref ] GC(8)     FinalRef (ms):
skipped
[27.807s][debug  ][gc,phases,ref ] GC(8)   Notify PhantomReferences: 0.0ms
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[27.808s][debug  ][gc,phases,ref  ] GC(8)     PhantomRef (ms):
skipped
[27.808s][debug  ][gc,phases,ref  ] GC(8)   SoftReference:
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Discovered: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Cleared: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)   WeakReference:
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Discovered: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Cleared: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)   FinalReference:
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Discovered: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Cleared: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)   PhantomReference:
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Discovered: 0
[27.808s][debug  ][gc,phases,ref  ] GC(8)     Cleared: 0
[27.808s][debug  ][gc,phases      ] GC(8) Reference Processing 0.586ms
[27.808s][debug  ][gc,phases,start] GC(8) Weak Processing
[27.808s][debug  ][gc,phases      ] GC(8)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Total                    Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)   ObjectSynchronizer Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Total                    Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)   JVMTI Tag Weak OopStorage   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)   StringTable Weak           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Total                    Min:
704, Avg: 891.8, Max: 1063, Diff: 359, Sum: 5351, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)   ResolvedMethodTable Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Total                    Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)   JNI Weak                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)   StringDedup Table Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases      ] GC(8)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[27.808s][debug  ][gc,phases       ] GC(8)     Total                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     StringDedup Requests0 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Dead                           Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Total                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     StringDedup Requests1 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Dead                           Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Total                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Dead                           Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8)     Total                          Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[27.808s][debug  ][gc,phases       ] GC(8) Weak Processing 0.675ms
[27.808s][debug  ][gc,ergo         ] GC(8) AdaptiveSizeStart:  collection: 9
[27.808s][debug  ][gc,ergo         ] GC(8) avg_survived_padded_avg:
44916876.000000
[27.809s][debug  ][gc,ergo         ] GC(8) avg_promoted_padded_avg:
56343792.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 2
target_size: 45088768
[27.809s][debug  ][gc,age          ] GC(8) Desired survivor size 45088768 bytes,
new threshold 2 (max threshold 15)
[27.809s][debug  ][gc,ergo         ] GC(8)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002428
major_cost: 0.000000 mutator_cost: 0.997572 throughput_goal: 0.990000
[27.809s][debug  ][gc,ergo         ] GC(8) Live_space: 297881664 free_space:
392167424
[27.809s][debug  ][gc,ergo         ] GC(8) Old eden_size: 190840832
desired_eden_size: 181403648
[27.809s][debug  ][gc,ergo         ] GC(8) AdaptiveSizeStop: collection: 9
[27.809s][info   ][gc,heap         ] GC(8) PSYoungGen: 184853K(217088K)-
>39936K(217600K) Eden: 180757K(181248K)->0K(177152K) From: 4096K(35840K)-
>39936K(40448K)
[27.809s][info   ][gc,heap         ] GC(8) ParOldGen: 134806K(262144K)-
>176791K(262144K)
[27.809s][info   ][gc,metaspace    ] GC(8) Metaspace: 1025K(1216K)->1025K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[27.809s][info   ][gc              ] GC(8) Pause Young (Allocation Failure) 312M-
>211M(468M) 10.636ms
[27.809s][info   ][gc,cpu          ] GC(8) User=0.06s Sys=0.00s Real=0.01s
[27.809s][debug  ][gc,heap         ] GC(8) Heap after GC invocations=9 (full 0):
[27.809s][debug  ][gc,heap         ] GC(8)  PSYoungGen      total 217600K, used
39936K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[27.809s][debug  ][gc,heap         ] GC(8)   eden space 177152K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fad00000)
[27.809s][debug  ][gc,heap         ] GC(8)   from space 40448K, 98% used
[0x00000000fb100000,0x00000000fd800270,0x00000000fd880000)
[27.809s][debug  ][gc,heap         ] GC(8)   to   space 40448K, 0% used
[0x00000000fd880000,0x00000000fd880000,0x0000000100000000)
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[27.809s][debug  ][gc,heap        ] GC(8)  ParOldGen      total 262144K, used
176791K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[27.809s][debug  ][gc,heap        ] GC(8)   object space 262144K, 67% used
[0x00000000c0000000,0x00000000caca5c28,0x00000000d0000000)
[27.809s][debug  ][gc,heap        ] GC(8)  Metaspace       used 1025K, committed
1216K, reserved 1056768K
[27.809s][debug  ][gc,heap        ] GC(8)   class space    used 83K, committed
192K, reserved 1048576K
[27.809s][debug  ][gc,task,time   ] GC(8) VM-Thread 277977484 278071709 278089636
[30.638s][debug  ][gc,heap        ] GC(9) Heap before GC invocations=10 (full 0):
[30.638s][debug  ][gc,heap        ] GC(9)  PSYoungGen     total 217600K, used
216520K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[30.638s][debug  ][gc,heap        ] GC(9)   eden space 177152K, 99% used
[0x00000000f0000000,0x00000000fac71ee0,0x00000000fad00000)
[30.638s][debug  ][gc,heap        ] GC(9)   from space 40448K, 98% used
[0x00000000fb100000,0x00000000fd800270,0x00000000fd880000)
[30.638s][debug  ][gc,heap        ] GC(9)   to   space 40448K, 0% used
[0x00000000fd880000,0x00000000fd880000,0x0000000100000000)
[30.638s][debug  ][gc,heap        ] GC(9)  ParOldGen      total 262144K, used
176791K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[30.638s][debug  ][gc,heap        ] GC(9)   object space 262144K, 67% used
[0x00000000c0000000,0x00000000caca5c28,0x00000000d0000000)
[30.638s][debug  ][gc,heap        ] GC(9)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[30.638s][debug  ][gc,heap        ] GC(9)   class space    used 83K, committed
192K, reserved 1048576K
[30.638s][debug  ][gc,tlab        ] GC(9) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 168 max 168 waste:  9.9% gc: 461776B max: 461776B slow: 0B max: 0B
[30.638s][info   ][gc,start       ] GC(9) Pause Young (Allocation Failure)
[30.638s][debug  ][gc,phases,start] GC(9) Scavenge
[30.644s][debug  ][gc,phases      ] GC(9) Scavenge 5.846ms
[30.644s][debug  ][gc,phases,start] GC(9) Reference Processing
[30.644s][debug  ][gc,ref         ] GC(9) Skipped phase 1 of Reference
Processing: no references
[30.644s][debug  ][gc,ref         ] GC(9) Skipped phase 2 of Reference
Processing: no references
[30.644s][debug  ][gc,ref         ] GC(9) Skipped phase 3 of Reference
Processing: no references
[30.644s][debug  ][gc,ref         ] GC(9) Skipped phase 4 of Reference
Processing: no references
[30.645s][debug  ][gc,phases,ref  ] GC(9) Reference Processing: 0.1ms
[30.645s][debug  ][gc,phases,ref  ] GC(9)   Reconsider SoftReferences: 0.0ms
[30.645s][debug  ][gc,phases,ref  ] GC(9)     SoftRef (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)   Notify Soft/WeakReferences: 0.0ms
[30.645s][debug  ][gc,phases,ref  ] GC(9)     SoftRef (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)     WeakRef (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)     FinalRef (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)     Total (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)   Notify and keep alive finalizable:
0.0ms
```

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[30.645s][debug  ][gc,phases,ref  ] GC(9)       FinalRef (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)     Notify PhantomReferences: 0.0ms
[30.645s][debug  ][gc,phases,ref  ] GC(9)       PhantomRef (ms):
skipped
[30.645s][debug  ][gc,phases,ref  ] GC(9)     SoftReference:
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Discovered: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Cleared: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)     WeakReference:
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Discovered: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Cleared: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)     FinalReference:
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Discovered: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Cleared: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)     PhantomReference:
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Discovered: 0
[30.645s][debug  ][gc,phases,ref  ] GC(9)       Cleared: 0
[30.645s][debug  ][gc,phases       ] GC(9) Reference Processing 0.560ms
[30.645s][debug  ][gc,phases,start] GC(9) Weak Processing
[30.645s][debug  ][gc,phases       ] GC(9)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Total                    Min:
0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)   ObjectSynchronizer weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Total                    Min:
0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)   JVMTI Tag Weak OopStorage    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)   StringTable Weak            Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Total                    Min:
704, Avg: 891.8, Max: 1088, Diff: 384, Sum: 5351, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)   ResolvedMethodTable Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Total                    Min:
0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)   JNI Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Dead                     Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.645s][debug  ][gc,phases       ] GC(9)     Total                    Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[30.645s][debug ][gc,phases      ] GC(9)    StringDedup Table Weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    StringDedup Requests0 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Dead                         Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9)    Total                        Min:
0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[30.646s][debug ][gc,phases      ] GC(9) Weak Processing 0.742ms
[30.646s][debug ][gc,ergo        ] GC(9) AdaptiveSizeStart:  collection: 10
[30.646s][debug ][gc,ergo        ] GC(9) avg_survived_padded_avg:
47605896.000000
[30.646s][debug ][gc,ergo        ] GC(9) avg_promoted_padded_avg:
53889096.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 47710208
[30.646s][debug ][gc,age         ] GC(9) Desired survivor size 47710208 bytes,
new threshold 1 (max threshold 15)
[30.646s][debug ][gc,ergo        ] GC(9)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002461
major_cost: 0.000000 mutator_cost: 0.997539 throughput_goal: 0.990000
[30.646s][debug ][gc,ergo        ] GC(9) Live_space: 299026528 free_space:
382730240
[30.646s][debug ][gc,ergo        ] GC(9) Old eden_size: 181403648
desired_eden_size: 177209344
[30.646s][debug ][gc,ergo        ] GC(9) AdaptiveSizeStop: collection: 10
[30.646s][info  ][gc,heap        ] GC(9) PSYoungGen: 216520K(217600K)-
>39936K(209408K) Eden: 176583K(177152K)->0K(168960K) From: 39936K(40448K)-
>39936K(40448K)
[30.646s][info  ][gc,heap        ] GC(9) ParOldGen: 176791K(262144K)-
>190103K(262144K)
[30.646s][info  ][gc,metaspace   ] GC(9) Metaspace: 1026K(1216K)->1026K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[30.646s][info  ][gc             ] GC(9) Pause Young (Allocation Failure) 384M-
>224M(460M) 7.574ms
[30.646s][info  ][gc,cpu         ] GC(9) User=0.00s Sys=0.00s Real=0.01s
[30.646s][debug ][gc,heap        ] GC(9) Heap after GC invocations=10 (full 0):
[30.646s][debug ][gc,heap        ] GC(9)  PSYoungGen      total 209408K, used
39936K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[30.646s][debug ][gc,heap        ] GC(9)   eden space 168960K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fa500000)
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[30.646s][debug  ][gc,heap         ] GC(9)   from space 40448K, 98% used
[0x00000000fd880000,0x00000000fff80270,0x0000000100000000)
[30.646s][debug  ][gc,heap         ] GC(9)   to   space 46592K, 0% used
[0x00000000fa500000,0x00000000fa500000,0x00000000fd280000)
[30.646s][debug  ][gc,heap         ] GC(9)  ParOldGen       total 262144K, used
190103K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[30.646s][debug  ][gc,heap         ] GC(9)   object space 262144K, 72% used
[0x00000000c0000000,0x00000000cb9a5cf8,0x00000000d0000000)
[30.646s][debug  ][gc,heap         ] GC(9)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[30.646s][debug  ][gc,heap         ] GC(9)   class space    used 83K, committed
192K, reserved 1048576K
[30.646s][debug  ][gc,task,time    ] GC(9) VM-Thread 306380604 306443991 306462927
[33.309s][debug  ][gc,heap         ] GC(10) Heap before GC invocations=11 (full
0):
[33.309s][debug  ][gc,heap         ] GC(10)  PSYoungGen      total 209408K, used
208168K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[33.310s][debug  ][gc,heap         ] GC(10)   eden space 168960K, 99% used
[0x00000000f0000000,0x00000000fa449e30,0x00000000fa500000)
[33.310s][debug  ][gc,heap         ] GC(10)   from space 40448K, 98% used
[0x00000000fd880000,0x00000000fff80270,0x0000000100000000)
[33.310s][debug  ][gc,heap         ] GC(10)   to   space 46592K, 0% used
[0x00000000fa500000,0x00000000fa500000,0x00000000fd280000)
[33.310s][debug  ][gc,heap         ] GC(10)  ParOldGen       total 262144K, used
190103K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[33.310s][debug  ][gc,heap         ] GC(10)   object space 262144K, 72% used
[0x00000000c0000000,0x00000000cb9a5cf8,0x00000000d0000000)
[33.310s][debug  ][gc,heap         ] GC(10)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[33.310s][debug  ][gc,heap         ] GC(10)   class space    used 83K, committed
192K, reserved 1048576K
[33.310s][debug  ][gc,tlab         ] GC(10) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 160 max 160 waste:  6.6% gc: 297888B max: 297888B slow: 0B max: 0B
[33.310s][info   ][gc,start        ] GC(10) Pause Young (Allocation Failure)
[33.310s][debug  ][gc,phases,start] GC(10) Scavenge
[33.312s][debug  ][gc,phases       ] GC(10) Scavenge 1.706ms
[33.312s][debug  ][gc,phases,start] GC(10) Reference Processing
[33.312s][debug  ][gc,ref          ] GC(10) Skipped phase 1 of Reference
Processing: no references
[33.312s][debug  ][gc,ref          ] GC(10) Skipped phase 2 of Reference
Processing: no references
[33.312s][debug  ][gc,ref          ] GC(10) Skipped phase 3 of Reference
Processing: no references
[33.312s][debug  ][gc,ref          ] GC(10) Skipped phase 4 of Reference
Processing: no references
[33.312s][debug  ][gc,phases,ref  ] GC(10) Reference Processing: 0.1ms
[33.312s][debug  ][gc,phases,ref  ] GC(10)   Reconsider SoftReferences: 0.0ms
[33.312s][debug  ][gc,phases,ref  ] GC(10)     SoftRef (ms):
skipped
[33.312s][debug  ][gc,phases,ref  ] GC(10)   Notify Soft/WeakReferences: 0.0ms
[33.312s][debug  ][gc,phases,ref  ] GC(10)     SoftRef (ms):
skipped
[33.312s][debug  ][gc,phases,ref  ] GC(10)     WeakRef (ms):
skipped
[33.312s][debug  ][gc,phases,ref  ] GC(10)     FinalRef (ms):
skipped
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[33.312s][debug  ][gc,phases,ref  ] GC(10)      Total (ms):
skipped
[33.312s][debug  ][gc,phases,ref  ] GC(10)      Notify and keep alive finalizable:
0.0ms
[33.312s][debug  ][gc,phases,ref  ] GC(10)      FinalRef (ms):
skipped
[33.312s][debug  ][gc,phases,ref  ] GC(10)      Notify PhantomReferences: 0.0ms
[33.312s][debug  ][gc,phases,ref  ] GC(10)      PhantomRef (ms):
skipped
[33.312s][debug  ][gc,phases,ref  ] GC(10)      SoftReference:
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Discovered: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Cleared: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)      WeakReference:
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Discovered: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Cleared: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)      FinalReference:
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Discovered: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Cleared: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)      PhantomReference:
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Discovered: 0
[33.312s][debug  ][gc,phases,ref  ] GC(10)        Cleared: 0
[33.312s][debug  ][gc,phases      ] GC(10) Reference Processing 0.676ms
[33.312s][debug  ][gc,phases,start] GC(10) Weak Processing
[33.312s][debug  ][gc,phases      ] GC(10)    VM Weak                      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.312s][debug  ][gc,phases      ] GC(10)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.312s][debug  ][gc,phases      ] GC(10)      Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[33.312s][debug  ][gc,phases      ] GC(10)    ObjectSynchronizer Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.312s][debug  ][gc,phases      ] GC(10)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)    JVMTI Tag Weak OopStorage     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)    StringTable Weak             Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Total
Min: 768, Avg: 891.8, Max: 1063, Diff: 295, Sum: 5351, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)    ResolvedMethodTable Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)      Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)    JNI Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
```

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[33.313s][debug  ][gc,phases      ] GC(10)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)     StringDedup Table Weak        Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)     StringDedup Requests0 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)     StringDedup Requests1 Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)     Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[33.313s][debug  ][gc,phases      ] GC(10) Weak Processing 0.790ms
[33.313s][debug  ][gc,ergo        ] GC(10) AdaptiveSizeStart:  collection: 11
[33.313s][debug  ][gc,ergo        ] GC(10) avg_survived_padded_avg:
48252732.000000
[33.313s][debug  ][gc,ergo        ] GC(10) avg_promoted_padded_avg:
51920424.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 48758784
[33.313s][debug  ][gc,age         ] GC(10) Desired survivor size 48758784 bytes,
new threshold 1 (max threshold 15)
[33.313s][debug  ][gc,ergo        ] GC(10)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002154
major_cost: 0.000000 mutator_cost: 0.997846 throughput_goal: 0.990000
[33.313s][debug  ][gc,ergo        ] GC(10) Live_space: 297645184 free_space:
378535936
[33.313s][debug  ][gc,ergo        ] GC(10) Old eden_size: 177209344
desired_eden_size: 169345024
[33.313s][debug  ][gc,ergo        ] GC(10) AdaptiveSizeStop: collection: 11
[33.313s][info   ][gc,heap        ] GC(10) PSYoungGen: 208168K(209408K)-
>16384K(185856K) Eden: 168231K(168960K)->0K(168960K) From: 39936K(40448K)-
>16384K(16896K)
[33.313s][info   ][gc,heap        ] GC(10) ParOldGen: 190103K(262144K)-
>190103K(262144K)
[33.313s][info   ][gc,metaspace   ] GC(10) Metaspace: 1026K(1216K)->1026K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[33.313s][info   ][gc             ] GC(10) Pause Young (Allocation Failure) 388M-
>201M(437M) 3.620ms
[33.313s][info   ][gc,cpu         ] GC(10) User=0.00s Sys=0.00s Real=0.00s
[33.313s][debug  ][gc,heap        ] GC(10) Heap after GC invocations=11 (full 0):
```

```
[33.314s][debug  ][gc,heap      ] GC(10)  PSYoungGen      total 185856K, used
16384K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[33.314s][debug  ][gc,heap      ] GC(10)   eden space 168960K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000fa500000)
[33.314s][debug  ][gc,heap      ] GC(10)   from space 16896K, 96% used
[0x00000000fa500000,0x00000000fb500100,0x00000000fb580000)
[33.314s][debug  ][gc,heap      ] GC(10)   to   space 47616K, 0% used
[0x00000000fd180000,0x00000000fd180000,0x0000000100000000)
[33.314s][debug  ][gc,heap      ] GC(10)  ParOldGen      total 262144K, used
190103K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[33.314s][debug  ][gc,heap      ] GC(10)   object space 262144K, 72% used
[0x00000000c0000000,0x00000000cb9a5cf8,0x00000000d0000000)
[33.314s][debug  ][gc,heap      ] GC(10)  Metaspace      used 1026K, committed
1216K, reserved 1056768K
[33.314s][debug  ][gc,heap      ] GC(10)   class space    used 83K, committed
192K, reserved 1048576K
[33.314s][debug  ][gc,task,time  ] GC(10) VM-Thread 333093615 333116254
333137091
[35.995s][debug  ][gc,heap      ] GC(11) Heap before GC invocations=12 (full
0):
[35.995s][debug  ][gc,heap      ] GC(11)  PSYoungGen      total 185856K, used
184618K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[35.995s][debug  ][gc,heap      ] GC(11)   eden space 168960K, 99% used
[0x00000000f0000000,0x00000000fa44a9d8,0x00000000fa500000)
[35.995s][debug  ][gc,heap      ] GC(11)   from space 16896K, 96% used
[0x00000000fa500000,0x00000000fb500100,0x00000000fb580000)
[35.995s][debug  ][gc,heap      ] GC(11)   to   space 47616K, 0% used
[0x00000000fd180000,0x00000000fd180000,0x0000000100000000)
[35.995s][debug  ][gc,heap      ] GC(11)  ParOldGen      total 262144K, used
190103K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[35.995s][debug  ][gc,heap      ] GC(11)   object space 262144K, 72% used
[0x00000000c0000000,0x00000000cb9a5cf8,0x00000000d0000000)
[35.995s][debug  ][gc,heap      ] GC(11)  Metaspace      used 1026K, committed
1216K, reserved 1056768K
[35.995s][debug  ][gc,heap      ] GC(11)   class space    used 83K, committed
192K, reserved 1048576K
[35.995s][debug  ][gc,tlab      ] GC(11) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 160 max 160 waste:  6.7% gc: 301936B max: 301936B slow: 0B max: 0B
[35.995s][info   ][gc,start     ] GC(11) Pause Young (Allocation Failure)
[35.995s][debug  ][gc,phases,start] GC(11) Scavenge
[36.005s][debug  ][gc,phases    ] GC(11) Scavenge 9.402ms
[36.005s][debug  ][gc,phases,start] GC(11) Reference Processing
[36.005s][debug  ][gc,ref       ] GC(11) Skipped phase 1 of Reference
Processing: no references
[36.005s][debug  ][gc,ref       ] GC(11) Skipped phase 2 of Reference
Processing: no references
[36.005s][debug  ][gc,ref       ] GC(11) Skipped phase 3 of Reference
Processing: no references
[36.005s][debug  ][gc,ref       ] GC(11) Skipped phase 4 of Reference
Processing: no references
[36.005s][debug  ][gc,phases,ref ] GC(11) Reference Processing: 0.1ms
[36.005s][debug  ][gc,phases,ref ] GC(11)   Reconsider SoftReferences: 0.0ms
[36.005s][debug  ][gc,phases,ref ] GC(11)    SoftRef (ms):
skipped
[36.005s][debug  ][gc,phases,ref ] GC(11)   Notify Soft/WeakReferences: 0.0ms
```

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[36.005s][debug  ][gc,phases,ref  ] GC(11)      SoftRef (ms):
skipped
[36.005s][debug  ][gc,phases,ref  ] GC(11)      WeakRef (ms):
skipped
[36.005s][debug  ][gc,phases,ref  ] GC(11)      FinalRef (ms):
skipped
[36.005s][debug  ][gc,phases,ref  ] GC(11)      Total (ms):
skipped
[36.005s][debug  ][gc,phases,ref  ] GC(11)      Notify and keep alive finalizable:
0.0ms
[36.005s][debug  ][gc,phases,ref  ] GC(11)      FinalRef (ms):
skipped
[36.005s][debug  ][gc,phases,ref  ] GC(11)      Notify PhantomReferences: 0.0ms
[36.005s][debug  ][gc,phases,ref  ] GC(11)      PhantomRef (ms):
skipped
[36.005s][debug  ][gc,phases,ref  ] GC(11)     SoftReference:
[36.005s][debug  ][gc,phases,ref  ] GC(11)       Discovered: 0
[36.005s][debug  ][gc,phases,ref  ] GC(11)       Cleared: 0
[36.005s][debug  ][gc,phases,ref  ] GC(11)     WeakReference:
[36.005s][debug  ][gc,phases,ref  ] GC(11)       Discovered: 0
[36.005s][debug  ][gc,phases,ref  ] GC(11)       Cleared: 0
[36.006s][debug  ][gc,phases,ref  ] GC(11)     FinalReference:
[36.006s][debug  ][gc,phases,ref  ] GC(11)       Discovered: 0
[36.006s][debug  ][gc,phases,ref  ] GC(11)       Cleared: 0
[36.006s][debug  ][gc,phases,ref  ] GC(11)     PhantomReference:
[36.006s][debug  ][gc,phases,ref  ] GC(11)       Discovered: 0
[36.006s][debug  ][gc,phases,ref  ] GC(11)       Cleared: 0
[36.006s][debug  ][gc,phases      ] GC(11) Reference Processing 0.681ms
[36.006s][debug  ][gc,phases,start] GC(11) Weak Processing
[36.006s][debug  ][gc,phases      ] GC(11)   VM Weak                      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   ObjectSynchronizer Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   JVMTI Tag Weak OopStorage     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   StringTable Weak             Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.1, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 768, Avg: 891.8, Max: 999, Diff: 231, Sum: 5351, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   ResolvedMethodTable Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
```

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[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   JNI Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   StringDedup Table weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   StringDedup Requests0 weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   StringDedup Requests1 weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)   Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.006s][debug  ][gc,phases      ] GC(11) Weak Processing 0.798ms
[36.007s][debug  ][gc,ergo        ] GC(11) AdaptiveSizeStart:  collection: 12
[36.007s][debug  ][gc,ergo        ] GC(11) avg_survived_padded_avg:
53387872.000000
[36.007s][debug  ][gc,ergo        ] GC(11) avg_promoted_padded_avg:
55135788.000000   avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 53477376
[36.007s][debug  ][gc,age         ] GC(11) Desired survivor size 53477376 bytes,
new threshold 1 (max threshold 15)
[36.007s][debug  ][gc,ergo        ] GC(11)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002638
major_cost: 0.000000 mutator_cost: 0.997362 throughput_goal: 0.990000
[36.007s][debug  ][gc,ergo        ] GC(11) Live_space: 299547744 free_space:
370671616
[36.007s][debug  ][gc,ergo        ] GC(11) Old eden_size: 169345024
desired_eden_size: 169345024
[36.007s][debug  ][gc,ergo        ] GC(11) AdaptiveSizeStop: collection: 12
[36.007s][info   ][gc,heap        ] GC(11) PSYoungGen: 184618K(185856K)-
>47104K(205312K) Eden: 168234K(168960K)->0K(157696K) From: 16384K(16896K)-
>47104K(47616K)
[36.007s][info   ][gc,heap        ] GC(11) ParOldGen: 190103K(262144K)-
>224919K(262144K)
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[36.007s][info   ][gc,metaspace   ] GC(11) Metaspace: 1026K(1216K)->1026K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[36.007s][info   ][gc             ] GC(11) Pause Young (Allocation Failure) 365M-
>265M(456M) 11.360ms
[36.007s][info   ][gc,cpu         ] GC(11) User=0.00s Sys=0.00s Real=0.01s
[36.007s][debug  ][gc,heap        ] GC(11) Heap after GC invocations=12 (full 0):
[36.007s][debug  ][gc,heap        ] GC(11)  PSYoungGen      total 205312K, used
47104K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[36.007s][debug  ][gc,heap        ] GC(11)   eden space 157696K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f9a00000)
[36.007s][debug  ][gc,heap        ] GC(11)   from space 47616K, 98% used
[0x00000000fd180000,0x00000000fff802e0,0x0000000100000000)
[36.007s][debug  ][gc,heap        ] GC(11)   to   space 52224K, 0% used
[0x00000000f9a00000,0x00000000f9a00000,0x00000000fcd00000)
[36.007s][debug  ][gc,heap        ] GC(11)  ParOldGen      total 262144K, used
224919K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[36.007s][debug  ][gc,heap        ] GC(11)   object space 262144K, 85% used
[0x00000000c0000000,0x00000000cdba5f18,0x00000000d0000000)
[36.007s][debug  ][gc,heap        ] GC(11)  Metaspace      used 1026K, committed
1216K, reserved 1056768K
[36.007s][debug  ][gc,heap        ] GC(11)   class space   used 83K, committed
192K, reserved 1048576K
[36.007s][debug  ][gc,task,time   ] GC(11) VM-Thread 359950450 360049766
360070854
[36.007s][debug  ][gc,phases,start] GC(12) Pre Compact
[36.007s][debug  ][gc,heap        ] GC(12) Heap before GC invocations=13 (full
1):
[36.007s][debug  ][gc,heap        ] GC(12)  PSYoungGen      total 205312K, used
47104K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[36.007s][debug  ][gc,heap        ] GC(12)   eden space 157696K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f9a00000)
[36.007s][debug  ][gc,heap        ] GC(12)   from space 47616K, 98% used
[0x00000000fd180000,0x00000000fff802e0,0x0000000100000000)
[36.007s][debug  ][gc,heap        ] GC(12)   to   space 52224K, 0% used
[0x00000000f9a00000,0x00000000f9a00000,0x00000000fcd00000)
[36.007s][debug  ][gc,heap        ] GC(12)  ParOldGen      total 262144K, used
224919K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[36.007s][debug  ][gc,heap        ] GC(12)   object space 262144K, 85% used
[0x00000000c0000000,0x00000000cdba5f18,0x00000000d0000000)
[36.007s][debug  ][gc,heap        ] GC(12)  Metaspace      used 1026K, committed
1216K, reserved 1056768K
[36.007s][debug  ][gc,heap        ] GC(12)   class space   used 83K, committed
192K, reserved 1048576K
[36.007s][debug  ][gc,phases      ] GC(12) Pre Compact 0.310ms
[36.007s][info   ][gc,start       ] GC(12) Pause Full (Ergonomics)
[36.007s][info   ][gc,phases,start] GC(12) Marking Phase
[36.008s][debug  ][gc,phases,start] GC(12) Par Mark
[36.008s][debug  ][gc,phases      ] GC(12) Par Mark 0.621ms
[36.008s][debug  ][gc,phases,start] GC(12) Reference Processing
[36.008s][debug  ][gc,ref         ] GC(12) Skipped phase 1 of Reference
Processing: no references
[36.008s][debug  ][gc,ref         ] GC(12) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[36.008s][debug  ][gc,ref         ] GC(12) Skipped phase 3 of Reference
Processing: no references
```

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[36.008s][debug  ][gc,ref        ] GC(12) ReferenceProcessor::execute queues: 1,
RefProcThreadModel::Single, marks_oops_alive: false
[36.008s][debug  ][gc,phases,ref ] GC(12) Reference Processing: 0.1ms
[36.008s][debug  ][gc,phases,ref ] GC(12)   Reconsider SoftReferences: 0.0ms
[36.008s][debug  ][gc,phases,ref ] GC(12)     SoftRef (ms):
skipped
[36.008s][debug  ][gc,phases,ref ] GC(12)   Notify Soft/WeakReferences: 0.0ms
[36.008s][debug  ][gc,phases,ref ] GC(12)     SoftRef (ms):
Min:  0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[36.008s][debug  ][gc,phases,ref ] GC(12)     WeakRef (ms):
Min:  0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[36.008s][debug  ][gc,phases,ref ] GC(12)     FinalRef (ms):
Min:  0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[36.008s][debug  ][gc,phases,ref ] GC(12)     Total (ms):
Min:  0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[36.008s][debug  ][gc,phases,ref ] GC(12)   Notify and keep alive finalizable:
0.0ms
[36.009s][debug  ][gc,phases,ref ] GC(12)     FinalRef (ms):
skipped
[36.009s][debug  ][gc,phases,ref ] GC(12)   Notify PhantomReferences: 0.0ms
[36.009s][debug  ][gc,phases,ref ] GC(12)     PhantomRef (ms):
Min:  0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 10
[36.009s][debug  ][gc,phases,ref ] GC(12)   SoftReference:
[36.009s][debug  ][gc,phases,ref ] GC(12)     Discovered: 0
[36.009s][debug  ][gc,phases,ref ] GC(12)     Cleared: 0
[36.009s][debug  ][gc,phases,ref ] GC(12)   WeakReference:
[36.009s][debug  ][gc,phases,ref ] GC(12)     Discovered: 76
[36.009s][debug  ][gc,phases,ref ] GC(12)     Cleared: 76
[36.009s][debug  ][gc,phases,ref ] GC(12)   FinalReference:
[36.009s][debug  ][gc,phases,ref ] GC(12)     Discovered: 0
[36.009s][debug  ][gc,phases,ref ] GC(12)     Cleared: 0
[36.009s][debug  ][gc,phases,ref ] GC(12)   PhantomReference:
[36.009s][debug  ][gc,phases,ref ] GC(12)     Discovered: 5
[36.009s][debug  ][gc,phases,ref ] GC(12)     Cleared: 5
[36.009s][debug  ][gc,phases     ] GC(12) Reference Processing 0.688ms
[36.009s][debug  ][gc,phases,start] GC(12) Weak Processing
[36.009s][debug  ][gc,phases     ] GC(12)   VM Weak                       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)     Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)   ObjectSynchronizer Weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)     Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)   JVMTI Tag Weak OopStorage      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases     ] GC(12)   StringTable Weak              Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
```

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[36.009s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Total
Min: 576, Avg: 891.8, Max: 1152, Diff: 576, Sum: 5351, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)    ResolvedMethodTable weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)    JNI Weak                      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)    StringDedup Table weak        Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)    StringDedup Requests0 weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.009s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)    StringDedup Requests1 weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)    Weak JFR Old Object Samples   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[36.010s][debug  ][gc,phases      ] GC(12) Weak Processing 0.810ms
[36.010s][debug  ][gc,phases,start] GC(12) Class Unloading
[36.010s][debug  ][gc,phases,start] GC(12) ClassLoaderData
[36.010s][debug  ][gc,phases      ] GC(12) ClassLoaderData 0.025ms
[36.010s][debug  ][gc,phases,start] GC(12) Trigger cleanups
[36.010s][debug  ][gc,phases      ] GC(12) Trigger cleanups 0.022ms
[36.010s][debug  ][gc,phases      ] GC(12) Class Unloading 0.296ms
[36.010s][info   ][gc,phases      ] GC(12) Marking Phase 2.548ms
[36.010s][info   ][gc,phases,start] GC(12) Summary Phase
[36.010s][info   ][gc,phases      ] GC(12) Summary Phase 0.031ms
[36.010s][info   ][gc,phases,start] GC(12) Adjust Roots
[36.011s][info   ][gc,phases      ] GC(12) Adjust Roots 0.501ms
[36.011s][info   ][gc,phases,start] GC(12) Compaction Phase
[36.019s][info   ][gc,phases      ] GC(12) Compaction Phase 8.729ms
[36.019s][info   ][gc,phases,start] GC(12) Post Compact
[36.022s][info   ][gc,phases      ] GC(12) Post Compact 2.154ms
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[36.022s][debug  ][gc,ergo         ] GC(12) AdaptiveSizeStart: collection: 13
[36.022s][debug  ][gc,ergo         ] GC(12)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002638
major_cost: 0.000395 mutator_cost: 0.996967 throughput_goal: 0.990000
[36.022s][debug  ][gc,ergo         ] GC(12) Live_space: 296436512 free_space:
370671616
[36.022s][debug  ][gc,ergo         ] GC(12) Old eden_size: 169345024
desired_eden_size: 158334976
[36.022s][debug  ][gc,ergo         ] GC(12)
PSAdaptiveSizePolicy::compute_old_gen_free_space: costs minor_time: 0.002638
major_cost: 0.000395  mutator_cost: 0.996967 throughput_goal: 0.990000
[36.022s][debug  ][gc,ergo         ] GC(12) Live_space: 381999296 free_space:
359661568
[36.022s][debug  ][gc,ergo         ] GC(12) Old promo_size: 201326592
desired_promo_size: 196083712
[36.022s][debug  ][gc            ] GC(12) Expanding ParOldGen from 262144K by
67072K to 329216K
[36.022s][debug  ][gc,ergo         ] GC(12) AdaptiveSizeStop: collection: 13
[36.022s][info   ][gc,heap       ] GC(12) PSYoungGen: 47104K(205312K)-
>0K(209920K) Eden: 0K(157696K)->0K(157696K) From: 47104K(47616K)->0K(52224K)
[36.022s][info   ][gc,heap       ] GC(12) ParOldGen: 224919K(262144K)-
>83557K(329216K)
[36.022s][info   ][gc,metaspace  ] GC(12) Metaspace: 1026K(1216K)->1026K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[36.022s][info   ][gc            ] GC(12) Pause Full (Ergonomics) 265M-
>81M(526M) 14.670ms
[36.022s][info   ][gc,cpu        ] GC(12) User=0.00s Sys=0.02s Real=0.01s
[36.022s][debug  ][gc,heap       ] GC(12) Heap after GC invocations=13 (full 1):
[36.022s][debug  ][gc,heap       ] GC(12)  PSYoungGen      total 209920K, used
0K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[36.022s][debug  ][gc,heap       ] GC(12)   eden space 157696K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f9a00000)
[36.022s][debug  ][gc,heap       ] GC(12)   from space 52224K, 0% used
[0x00000000f9a00000,0x00000000f9a00000,0x00000000fcd00000)
[36.022s][debug  ][gc,heap       ] GC(12)   to   space 52224K, 0% used
[0x00000000fcd00000,0x00000000fcd00000,0x0000000100000000)
[36.022s][debug  ][gc,heap       ] GC(12)  ParOldGen       total 329216K, used
83557K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[36.022s][debug  ][gc,heap       ] GC(12)   object space 329216K, 25% used
[0x00000000c0000000,0x00000000c51995b0,0x00000000d4180000)
[36.022s][debug  ][gc,heap       ] GC(12)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[36.022s][debug  ][gc,heap       ] GC(12)   class space    used 83K, committed
192K, reserved 1048576K
[36.022s][debug  ][gc,task,time  ] GC(12) VM-Thread 360074838 360106685
360221758
[38.561s][debug  ][gc,heap       ] GC(13) Heap before GC invocations=14 (full
1):
[38.561s][debug  ][gc,heap       ] GC(13)  PSYoungGen      total 209920K, used
156747K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[38.561s][debug  ][gc,heap       ] GC(13)   eden space 157696K, 99% used
[0x00000000f0000000,0x00000000f9912e08,0x00000000f9a00000)
[38.561s][debug  ][gc,heap       ] GC(13)   from space 52224K, 0% used
[0x00000000f9a00000,0x00000000f9a00000,0x00000000fcd00000)
[38.561s][debug  ][gc,heap       ] GC(13)   to   space 52224K, 0% used
[0x00000000fcd00000,0x00000000fcd00000,0x0000000100000000)
```

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[38.561s][debug  ][gc,heap         ] GC(13)  ParOldGen       total 329216K, used
83557K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[38.561s][debug  ][gc,heap         ] GC(13)   object space 329216K, 25% used
[0x00000000c0000000,0x00000000c51995b0,0x00000000d4180000)
[38.561s][debug  ][gc,heap         ] GC(13)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[38.561s][debug  ][gc,heap         ] GC(13)   class space    used 83K, committed
192K, reserved 1048576K
[38.561s][debug  ][gc,tlab         ] GC(13) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 149 max 149 waste:  1.7% gc: 72744B max: 72744B slow: 0B max: 0B
[38.561s][info   ][gc,start        ] GC(13) Pause Young (Allocation Failure)
[38.561s][debug  ][gc,phases,start] GC(13) Scavenge
[38.565s][debug  ][gc,phases       ] GC(13) Scavenge 3.263ms
[38.565s][debug  ][gc,phases,start] GC(13) Reference Processing
[38.565s][debug  ][gc,ref          ] GC(13) Skipped phase 1 of Reference
Processing: no references
[38.565s][debug  ][gc,ref          ] GC(13) Skipped phase 2 of Reference
Processing: no references
[38.565s][debug  ][gc,ref          ] GC(13) Skipped phase 3 of Reference
Processing: no references
[38.565s][debug  ][gc,ref          ] GC(13) Skipped phase 4 of Reference
Processing: no references
[38.565s][debug  ][gc,phases,ref  ] GC(13) Reference Processing: 0.1ms
[38.565s][debug  ][gc,phases,ref  ] GC(13)   Reconsider SoftReferences: 0.0ms
[38.565s][debug  ][gc,phases,ref  ] GC(13)     SoftRef (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)   Notify Soft/WeakReferences: 0.0ms
[38.565s][debug  ][gc,phases,ref  ] GC(13)     SoftRef (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)     WeakRef (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)     FinalRef (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Total (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)   Notify and keep alive finalizable:
0.0ms
[38.565s][debug  ][gc,phases,ref  ] GC(13)     FinalRef (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)   Notify PhantomReferences: 0.0ms
[38.565s][debug  ][gc,phases,ref  ] GC(13)     PhantomRef (ms):
skipped
[38.565s][debug  ][gc,phases,ref  ] GC(13)   SoftReference:
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Discovered: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Cleared: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)   WeakReference:
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Discovered: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Cleared: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)   FinalReference:
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Discovered: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Cleared: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)   PhantomReference:
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Discovered: 0
[38.565s][debug  ][gc,phases,ref  ] GC(13)     Cleared: 0
[38.565s][debug  ][gc,phases       ] GC(13) Reference Processing 0.562ms
[38.565s][debug  ][gc,phases,start] GC(13) Weak Processing
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[38.565s][debug  ][gc,phases      ] GC(13)    VM Weak                          Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.565s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    ObjectSynchronizer Weak          Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    JVMTI Tag Weak OopStorage        Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    StringTable Weak                 Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 768, Avg: 891.8, Max: 1127, Diff: 359, Sum: 5351, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    ResolvedMethodTable Weak         Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    JNI Weak                         Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    StringDedup Table Weak           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    StringDedup Requests0 Weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    StringDedup Requests1 Weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases      ] GC(13)    Weak JFR Old Object Samples      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
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[38.566s][debug  ][gc,phases        ] GC(13)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases        ] GC(13)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[38.566s][debug  ][gc,phases        ] GC(13) Weak Processing 0.672ms
[38.566s][debug  ][gc,ergo          ] GC(13) AdaptiveSizeStart:  collection: 14
[38.566s][debug  ][gc,ergo          ] GC(13) avg_survived_padded_avg:
52452080.000000
[38.566s][debug  ][gc,ergo          ] GC(13) avg_promoted_padded_avg:
53184640.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 52953088
[38.566s][debug  ][gc,age           ] GC(13) Desired survivor size 52953088 bytes,
new threshold 1 (max threshold 15)
[38.566s][debug  ][gc,ergo          ] GC(13)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002430
major_cost: 0.000395 mutator_cost: 0.997175 throughput_goal: 0.990000
[38.566s][debug  ][gc,ergo          ] GC(13) Live_space: 382659584 free_space:
354418688
[38.566s][debug  ][gc,ergo          ] GC(13) Old eden_size: 158334976
desired_eden_size: 158334976
[38.566s][debug  ][gc,ergo          ] GC(13) AdaptiveSizeStop: collection: 14
[38.566s][info   ][gc,heap          ] GC(13) PSYoungGen: 156747K(209920K)-
>33792K(210432K) Eden: 156747K(157696K)->0K(158208K) From: 0K(52224K)-
>33792K(52224K)
[38.566s][info   ][gc,heap          ] GC(13) ParOldGen: 83557K(329216K)-
>83557K(329216K)
[38.566s][info   ][gc,metaspace     ] GC(13) Metaspace: 1026K(1216K)->1026K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[38.566s][info   ][gc               ] GC(13) Pause Young (Allocation Failure) 234M-
>114M(527M) 4.913ms
[38.566s][info   ][gc,cpu           ] GC(13) User=0.00s Sys=0.00s Real=0.01s
[38.566s][debug  ][gc,heap          ] GC(13) Heap after GC invocations=14 (full 1):
[38.566s][debug  ][gc,heap          ] GC(13)  PSYoungGen      total 210432K, used
33792K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[38.566s][debug  ][gc,heap          ] GC(13)   eden space 158208K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f9a80000)
[38.566s][debug  ][gc,heap          ] GC(13)   from space 52224K, 64% used
[0x00000000fcd00000,0x00000000fee00210,0x0000000100000000)
[38.566s][debug  ][gc,heap          ] GC(13)   to   space 51712K, 0% used
[0x00000000f9a80000,0x00000000f9a80000,0x00000000fcd00000)
[38.567s][debug  ][gc,heap          ] GC(13)  ParOldGen       total 329216K, used
83557K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[38.567s][debug  ][gc,heap          ] GC(13)   object space 329216K, 25% used
[0x00000000c0000000,0x00000000c51995b0,0x00000000d4180000)
[38.567s][debug  ][gc,heap          ] GC(13)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[38.567s][debug  ][gc,heap          ] GC(13)   class space    used 83K, committed
192K, reserved 1048576K
[38.567s][debug  ][gc,task,time     ] GC(13) VM-Thread 385610812 385648350
385666000
[41.143s][debug  ][gc,heap          ] GC(14) Heap before GC invocations=15 (full
1):
[41.143s][debug  ][gc,heap          ] GC(14)  PSYoungGen      total 210432K, used
191547K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[41.143s][debug  ][gc,heap          ] GC(14)   eden space 158208K, 99% used
[0x00000000f0000000,0x00000000f9a0ed68,0x00000000f9a80000)
```

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[41.143s][debug   ][gc,heap        ] GC(14)   from space 52224K, 64% used
[0x00000000fcd00000,0x00000000fee00210,0x0000000100000000)
[41.143s][debug   ][gc,heap        ] GC(14)   to   space 51712K, 0% used
[0x00000000f9a80000,0x00000000f9a80000,0x00000000fcd00000)
[41.143s][debug   ][gc,heap        ] GC(14)  ParOldGen      total 329216K, used
83557K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[41.144s][debug   ][gc,heap        ] GC(14)   object space 329216K, 25% used
[0x00000000c0000000,0x00000000c51995b0,0x00000000d4180000)
[41.144s][debug   ][gc,heap        ] GC(14)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[41.144s][debug   ][gc,heap        ] GC(14)   class space    used 83K, committed
192K, reserved 1048576K
[41.144s][debug   ][gc,tlab        ] GC(14) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 150 max 150 waste:  1.3% gc: 57248B max: 57248B slow: 0B max: 0B
[41.144s][info    ][gc,start       ] GC(14) Pause Young (Allocation Failure)
[41.144s][debug   ][gc,phases,start] GC(14) Scavenge
[41.153s][debug   ][gc,phases      ] GC(14) Scavenge 9.404ms
[41.153s][debug   ][gc,phases,start] GC(14) Reference Processing
[41.153s][debug   ][gc,ref         ] GC(14) Skipped phase 1 of Reference
Processing: no references
[41.153s][debug   ][gc,ref         ] GC(14) Skipped phase 2 of Reference
Processing: no references
[41.153s][debug   ][gc,ref         ] GC(14) Skipped phase 3 of Reference
Processing: no references
[41.153s][debug   ][gc,ref         ] GC(14) Skipped phase 4 of Reference
Processing: no references
[41.153s][debug   ][gc,phases,ref  ] GC(14) Reference Processing: 0.1ms
[41.153s][debug   ][gc,phases,ref  ] GC(14)   Reconsider SoftReferences: 0.0ms
[41.153s][debug   ][gc,phases,ref  ] GC(14)     SoftRef (ms):
skipped
[41.153s][debug   ][gc,phases,ref  ] GC(14)   Notify Soft/WeakReferences: 0.0ms
[41.153s][debug   ][gc,phases,ref  ] GC(14)     SoftRef (ms):
skipped
[41.153s][debug   ][gc,phases,ref  ] GC(14)     WeakRef (ms):
skipped
[41.154s][debug   ][gc,phases,ref  ] GC(14)     FinalRef (ms):
skipped
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Total (ms):
skipped
[41.154s][debug   ][gc,phases,ref  ] GC(14)   Notify and keep alive finalizable:
0.0ms
[41.154s][debug   ][gc,phases,ref  ] GC(14)     FinalRef (ms):
skipped
[41.154s][debug   ][gc,phases,ref  ] GC(14)   Notify PhantomReferences: 0.0ms
[41.154s][debug   ][gc,phases,ref  ] GC(14)     PhantomRef (ms):
skipped
[41.154s][debug   ][gc,phases,ref  ] GC(14)   SoftReference:
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Discovered: 0
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Cleared: 0
[41.154s][debug   ][gc,phases,ref  ] GC(14)   WeakReference:
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Discovered: 0
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Cleared: 0
[41.154s][debug   ][gc,phases,ref  ] GC(14)   FinalReference:
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Discovered: 0
[41.154s][debug   ][gc,phases,ref  ] GC(14)     Cleared: 0
[41.154s][debug   ][gc,phases,ref  ] GC(14)   PhantomReference:
```

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[41.154s][debug  ][gc,phases,ref  ] GC(14)      Discovered: 0
[41.154s][debug  ][gc,phases,ref  ] GC(14)      Cleared: 0
[41.154s][debug  ][gc,phases      ] GC(14) Reference Processing 0.681ms
[41.154s][debug  ][gc,phases,start] GC(14) Weak Processing
[41.154s][debug  ][gc,phases      ] GC(14)   VM Weak                       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)   ObjectSynchronizer weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)   JVMTI Tag Weak OopStorage      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)   StringTable weak              Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.1, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 768, Avg: 891.8, Max: 1024, Diff: 256, Sum: 5351, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)   ResolvedMethodTable weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)   JNI Weak                      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)   StringDedup Table Weak        Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.154s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.155s][debug  ][gc,phases      ] GC(14)   StringDedup Requests0 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.155s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.155s][debug  ][gc,phases      ] GC(14)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.155s][debug  ][gc,phases      ] GC(14)   StringDedup Requests1 Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.155s][debug  ][gc,phases      ] GC(14)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[41.155s][debug  ][gc,phases     ] GC(14)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.155s][debug  ][gc,phases     ] GC(14)      Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[41.155s][debug  ][gc,phases     ] GC(14)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.155s][debug  ][gc,phases     ] GC(14)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[41.155s][debug  ][gc,phases     ] GC(14) Weak Processing 0.800ms
[41.155s][debug  ][gc,ergo       ] GC(14) AdaptiveSizeStart:  collection: 15
[41.155s][debug  ][gc,ergo       ] GC(14) avg_survived_padded_avg:
58111244.000000
[41.155s][debug  ][gc,ergo       ] GC(14) avg_promoted_padded_avg:
57480108.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 58195968
[41.155s][debug  ][gc,age        ] GC(14) Desired survivor size 58195968 bytes,
new threshold 1 (max threshold 15)
[41.155s][debug  ][gc,ergo       ] GC(14)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002887
major_cost: 0.000395 mutator_cost: 0.996719 throughput_goal: 0.990000
[41.155s][debug  ][gc,ergo       ] GC(14) Live_space: 385036416 free_space:
354418688
[41.155s][debug  ][gc,ergo       ] GC(14) Old eden_size: 158334976
desired_eden_size: 158859264
[41.155s][debug  ][gc,ergo       ] GC(14) AdaptiveSizeStop: collection: 15
[41.155s][info   ][gc,heap       ] GC(14) PSYoungGen: 191547K(210432K)-
>51200K(206848K) Eden: 157755K(158208K)->0K(155136K) From: 33792K(52224K)-
>51200K(51712K)
[41.155s][info   ][gc,heap       ] GC(14) ParOldGen: 83557K(329216K)-
>121446K(329216K)
[41.155s][info   ][gc,metaspace  ] GC(14) Metaspace: 1026K(1216K)->1026K(1216K)
NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[41.155s][info   ][gc            ] GC(14) Pause Young (Allocation Failure) 268M-
>168M(523M) 11.377ms
[41.155s][info   ][gc,cpu        ] GC(14) User=0.14s Sys=0.00s Real=0.01s
[41.155s][debug  ][gc,heap       ] GC(14) Heap after GC invocations=15 (full 1):
[41.155s][debug  ][gc,heap       ] GC(14)  PSYoungGen      total 206848K, used
51200K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[41.155s][debug  ][gc,heap       ] GC(14)   eden space 155136K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f9780000)
[41.155s][debug  ][gc,heap       ] GC(14)   from space 51712K, 99% used
[0x00000000f9a80000,0x00000000fcc80320,0x00000000fcd00000)
[41.155s][debug  ][gc,heap       ] GC(14)   to   space 52224K, 0% used
[0x00000000fcd00000,0x00000000fcd00000,0x0000000100000000)
[41.155s][debug  ][gc,heap       ] GC(14)  ParOldGen       total 329216K, used
121446K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[41.155s][debug  ][gc,heap       ] GC(14)   object space 329216K, 36% used
[0x00000000c0000000,0x00000000c7699800,0x00000000d4180000)
[41.155s][debug  ][gc,heap       ] GC(14)  Metaspace       used 1026K, committed
1216K, reserved 1056768K
[41.155s][debug  ][gc,heap       ] GC(14)   class space    used 83K, committed
192K, reserved 1048576K
[41.155s][debug  ][gc,task,time  ] GC(14) VM-Thread 411432083 411532369
411553725
[43.658s][debug  ][gc,heap       ] GC(15) Heap before GC invocations=16 (full
1):
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[43.658s][debug  ][gc,heap        ] GC(15) PSYoungGen      total 206848K, used
206336K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[43.658s][debug  ][gc,heap        ] GC(15)  eden space 155136K, 100% used
[0x00000000f0000000,0x00000000f9780000,0x00000000f9780000)
[43.658s][debug  ][gc,heap        ] GC(15)  from space 51712K, 99% used
[0x00000000f9a80000,0x00000000fcc80320,0x00000000fcd00000)
[43.658s][debug  ][gc,heap        ] GC(15)  to   space 52224K, 0% used
[0x00000000fcd00000,0x00000000fcd00000,0x0000000100000000)
[43.658s][debug  ][gc,heap        ] GC(15) ParOldGen      total 329216K, used
121446K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[43.658s][debug  ][gc,heap        ] GC(15)  object space 329216K, 36% used
[0x00000000c0000000,0x00000000c7699800,0x00000000d4180000)
[43.658s][debug  ][gc,heap        ] GC(15) Metaspace       used 1027K, committed
1216K, reserved 1056768K
[43.658s][debug  ][gc,heap        ] GC(15)  class space    used 83K, committed
192K, reserved 1048576K
[43.658s][debug  ][gc,tlab        ] GC(15) TLAB totals: thrds: 1  refills: 38
max: 38 slow allocs: 1 max 1 waste:  0.3% gc: 223504B max: 223504B slow: 296240B
max: 296240B
[43.658s][info   ][gc,start       ] GC(15) Pause Young (Allocation Failure)
[43.658s][debug  ][gc,phases,start] GC(15) Scavenge
[43.662s][debug  ][gc,phases      ] GC(15) Scavenge 4.112ms
[43.663s][debug  ][gc,phases,start] GC(15) Reference Processing
[43.663s][debug  ][gc,ref         ] GC(15) Skipped phase 1 of Reference
Processing: no references
[43.663s][debug  ][gc,ref         ] GC(15) Skipped phase 2 of Reference
Processing: no references
[43.663s][debug  ][gc,ref         ] GC(15) Skipped phase 3 of Reference
Processing: no references
[43.663s][debug  ][gc,ref         ] GC(15) Skipped phase 4 of Reference
Processing: no references
[43.663s][debug  ][gc,phases,ref  ] GC(15) Reference Processing: 0.1ms
[43.663s][debug  ][gc,phases,ref  ] GC(15)   Reconsider SoftReferences: 0.0ms
[43.663s][debug  ][gc,phases,ref  ] GC(15)     SoftRef (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)   Notify Soft/WeakReferences: 0.0ms
[43.663s][debug  ][gc,phases,ref  ] GC(15)     SoftRef (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)     WeakRef (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)     FinalRef (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)     Total (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)   Notify and keep alive finalizable:
0.0ms
[43.663s][debug  ][gc,phases,ref  ] GC(15)     FinalRef (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)   Notify PhantomReferences: 0.0ms
[43.663s][debug  ][gc,phases,ref  ] GC(15)     PhantomRef (ms):
skipped
[43.663s][debug  ][gc,phases,ref  ] GC(15)   SoftReference:
[43.663s][debug  ][gc,phases,ref  ] GC(15)     Discovered: 0
[43.663s][debug  ][gc,phases,ref  ] GC(15)     Cleared: 0
[43.663s][debug  ][gc,phases,ref  ] GC(15)   WeakReference:
[43.663s][debug  ][gc,phases,ref  ] GC(15)     Discovered: 0
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[43.663s][debug  ][gc,phases,ref  ] GC(15)       Cleared: 0
[43.663s][debug  ][gc,phases,ref  ] GC(15)     FinalReference:
[43.663s][debug  ][gc,phases,ref  ] GC(15)       Discovered: 0
[43.663s][debug  ][gc,phases,ref  ] GC(15)       Cleared: 0
[43.663s][debug  ][gc,phases,ref  ] GC(15)     PhantomReference:
[43.663s][debug  ][gc,phases,ref  ] GC(15)       Discovered: 0
[43.663s][debug  ][gc,phases,ref  ] GC(15)       Cleared: 0
[43.663s][debug  ][gc,phases     ] GC(15) Reference Processing 0.573ms
[43.663s][debug  ][gc,phases,start] GC(15) Weak Processing
[43.663s][debug  ][gc,phases     ] GC(15)     VM Weak                      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     ObjectSynchronizer Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     JVMTI Tag Weak OopStorage     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     StringTable Weak             Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.1, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     Total
Min: 704, Avg: 891.8, Max: 960, Diff: 256, Sum: 5351, Workers: 6
[43.663s][debug  ][gc,phases     ] GC(15)     ResolvedMethodTable Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     JNI Weak                     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     StringDedup Table Weak       Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     StringDedup Requests0 Weak   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.664s][debug  ][gc,phases     ] GC(15)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[43.664s][debug  ][gc,phases       ] GC(15)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15)      StringDedup Requests1 Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15)        Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15)      Weak JFR Old Object Samples     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15)        Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[43.664s][debug  ][gc,phases       ] GC(15) Weak Processing 0.706ms
[43.664s][debug  ][gc,ergo         ] GC(15) AdaptiveSizeStart:  collection: 16
[43.664s][debug  ][gc,ergo         ] GC(15) avg_survived_padded_avg:
57982604.000000
[43.664s][debug  ][gc,ergo         ] GC(15) avg_promoted_padded_avg:
55511696.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 58195968
[43.664s][debug  ][gc,age          ] GC(15) Desired survivor size 58195968 bytes,
new threshold 1 (max threshold 15)
[43.664s][debug  ][gc,ergo         ] GC(15)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002715
major_cost: 0.000395 mutator_cost: 0.996891 throughput_goal: 0.990000
[43.664s][debug  ][gc,ergo         ] GC(15) Live_space: 385917248 free_space:
354942976
[43.664s][debug  ][gc,ergo         ] GC(15) Old eden_size: 158859264
desired_eden_size: 155713536
[43.664s][debug  ][gc,ergo         ] GC(15) AdaptiveSizeStop: collection: 16
[43.664s][info   ][gc,heap         ] GC(15) PSYoungGen: 206336K(206848K)-
>38912K(200704K) Eden: 155136K(155136K)->0K(148480K) From: 51200K(51712K)-
>38912K(52224K)
[43.664s][info   ][gc,heap         ] GC(15) ParOldGen: 121446K(329216K)-
>121446K(329216K)
[43.664s][info   ][gc,metaspace    ] GC(15) Metaspace: 1027K(1216K)->1027K(1216K)
NonClass: 944K(1024K)->944K(1024K) Class: 83K(192K)->83K(192K)
[43.664s][info   ][gc              ] GC(15) Pause Young (Allocation Failure) 320M-
>156M(517M) 5.817ms
[43.664s][info   ][gc,cpu          ] GC(15) User=0.00s Sys=0.00s Real=0.01s
[43.664s][debug  ][gc,heap         ] GC(15) Heap after GC invocations=16 (full 1):
[43.664s][debug  ][gc,heap         ] GC(15)  PSYoungGen      total 200704K, used
38912K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[43.664s][debug  ][gc,heap         ] GC(15)   eden space 148480K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f9100000)
[43.664s][debug  ][gc,heap         ] GC(15)   from space 52224K, 74% used
[0x00000000fcd00000,0x00000000ff300260,0x0000000100000000)
[43.664s][debug  ][gc,heap         ] GC(15)   to   space 56832K, 0% used
[0x00000000f9100000,0x00000000f9100000,0x00000000fc880000)
[43.664s][debug  ][gc,heap         ] GC(15)  ParOldGen       total 329216K, used
121446K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[43.664s][debug  ][gc,heap         ] GC(15)   object space 329216K, 36% used
[0x00000000c0000000,0x00000000c7699800,0x00000000d4180000)
[43.664s][debug  ][gc,heap         ] GC(15)  Metaspace       used 1027K, committed
1216K, reserved 1056768K
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[43.664s][debug  ][gc,heap       ] GC(15)   class space    used 83K, committed
192K, reserved 1048576K
[43.664s][debug  ][gc,task,time  ] GC(15) VM-Thread 436579532 436625522
436643698
[46.047s][debug  ][gc,heap       ] GC(16) Heap before GC invocations=17 (full
1):
[46.047s][debug  ][gc,heap       ] GC(16)  PSYoungGen      total 200704K, used
187278K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[46.047s][debug  ][gc,heap       ] GC(16)   eden space 148480K, 99% used
[0x00000000f0000000,0x00000000f90e3690,0x00000000f9100000)
[46.047s][debug  ][gc,heap       ] GC(16)   from space 52224K, 74% used
[0x00000000fcd00000,0x00000000ff300260,0x0000000100000000)
[46.047s][debug  ][gc,heap       ] GC(16)   to   space 56832K, 0% used
[0x00000000f9100000,0x00000000f9100000,0x00000000fc880000)
[46.047s][debug  ][gc,heap       ] GC(16)  ParOldGen      total 329216K, used
121446K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[46.047s][debug  ][gc,heap       ] GC(16)   object space 329216K, 36% used
[0x00000000c0000000,0x00000000c7699800,0x00000000d4180000)
[46.047s][debug  ][gc,heap       ] GC(16)  Metaspace      used 1028K, committed
1216K, reserved 1056768K
[46.047s][debug  ][gc,heap       ] GC(16)   class space    used 83K, committed
192K, reserved 1048576K
[46.047s][debug  ][gc,tlab       ] GC(16) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 141 max 141 waste: 22.8% gc: 928104B max: 928104B slow: 0B max: 0B
[46.047s][info   ][gc,start      ] GC(16) Pause Young (Allocation Failure)
[46.047s][debug  ][gc,phases,start] GC(16) Scavenge
[46.056s][debug  ][gc,phases      ] GC(16) Scavenge 8.805ms
[46.056s][debug  ][gc,phases,start] GC(16) Reference Processing
[46.056s][debug  ][gc,ref        ] GC(16) Skipped phase 1 of Reference
Processing: no references
[46.056s][debug  ][gc,ref        ] GC(16) Skipped phase 2 of Reference
Processing: no references
[46.056s][debug  ][gc,ref        ] GC(16) Skipped phase 3 of Reference
Processing: no references
[46.056s][debug  ][gc,ref        ] GC(16) Skipped phase 4 of Reference
Processing: no references
[46.056s][debug  ][gc,phases,ref ] GC(16) Reference Processing: 0.1ms
[46.056s][debug  ][gc,phases,ref ] GC(16)   Reconsider SoftReferences: 0.0ms
[46.056s][debug  ][gc,phases,ref ] GC(16)     SoftRef (ms):
skipped
[46.056s][debug  ][gc,phases,ref ] GC(16)   Notify Soft/WeakReferences: 0.0ms
[46.056s][debug  ][gc,phases,ref ] GC(16)     SoftRef (ms):
skipped
[46.056s][debug  ][gc,phases,ref ] GC(16)     WeakRef (ms):
skipped
[46.056s][debug  ][gc,phases,ref ] GC(16)     FinalRef (ms):
skipped
[46.056s][debug  ][gc,phases,ref ] GC(16)     Total (ms):
skipped
[46.056s][debug  ][gc,phases,ref ] GC(16)   Notify and keep alive finalizable:
0.0ms
[46.057s][debug  ][gc,phases,ref ] GC(16)     FinalRef (ms):
skipped
[46.057s][debug  ][gc,phases,ref ] GC(16)   Notify PhantomReferences: 0.0ms
[46.057s][debug  ][gc,phases,ref ] GC(16)     PhantomRef (ms):
skipped
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[46.057s][debug  ][gc,phases,ref  ] GC(16)   SoftReference:
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Discovered: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Cleared: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)   WeakReference:
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Discovered: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Cleared: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)   FinalReference:
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Discovered: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Cleared: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)   PhantomReference:
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Discovered: 0
[46.057s][debug  ][gc,phases,ref  ] GC(16)     Cleared: 0
[46.057s][debug  ][gc,phases      ] GC(16) Reference Processing 0.698ms
[46.057s][debug  ][gc,phases,start] GC(16) Weak Processing
[46.057s][debug  ][gc,phases      ] GC(16)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)   ObjectSynchronizer Weak    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)   JVMTI Tag Weak OopStorage   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)   StringTable Weak           Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 704, Avg: 891.8, Max: 1088, Diff: 384, Sum: 5351, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)   ResolvedMethodTable weak   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)   JNI Weak                   Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)   StringDedup Table Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.057s][debug  ][gc,phases      ] GC(16)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[46.057s][debug ][gc,phases      ] GC(16)     StringDedup Requests0 Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)     StringDedup Requests1 Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)    Weak JFR Old Object Samples    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)       Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16)       Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[46.058s][debug ][gc,phases      ] GC(16) Weak Processing 0.816ms
[46.058s][debug ][gc,ergo        ] GC(16) AdaptiveSizeStart:  collection: 17
[46.058s][debug ][gc,ergo        ] GC(16) avg_survived_padded_avg:
64292688.000000
[46.058s][debug ][gc,ergo        ] GC(16) avg_promoted_padded_avg:
55652724.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 64487424
[46.058s][debug ][gc,age         ] GC(16) Desired survivor size 64487424 bytes,
new threshold 1 (max threshold 15)
[46.058s][debug ][gc,ergo        ] GC(16)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.003129
major_cost: 0.000395 mutator_cost: 0.996477 throughput_goal: 0.990000
[46.058s][debug ][gc,ergo        ] GC(16) Live_space: 388492608 free_space:
351797248
[46.058s][debug ][gc,ergo        ] GC(16) Old eden_size: 155713536
desired_eden_size: 148897792
[46.058s][debug ][gc,ergo        ] GC(16) AdaptiveSizeStop: collection: 17
[46.058s][info  ][gc,heap        ] GC(16) PSYoungGen: 187278K(200704K)-
>56320K(202240K) Eden: 148365K(148480K)->0K(145408K) From: 38912K(52224K)-
>56320K(56832K)
[46.058s][info  ][gc,heap        ] GC(16) ParOldGen: 121446K(329216K)-
>149094K(329216K)
[46.058s][info  ][gc,metaspace   ] GC(16) Metaspace: 1028K(1216K)->1028K(1216K)
NonClass: 945K(1024K)->945K(1024K) Class: 83K(192K)->83K(192K)
[46.058s][info  ][gc             ] GC(16) Pause Young (Allocation Failure) 301M-
>200M(519M) 10.802ms
[46.058s][info  ][gc,cpu         ] GC(16) User=0.02s Sys=0.00s Real=0.01s
[46.058s][debug ][gc,heap        ] GC(16) Heap after GC invocations=17 (full 1):
[46.058s][debug ][gc,heap        ] GC(16)  PSYoungGen      total 202240K, used
56320K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[46.058s][debug ][gc,heap        ] GC(16)   eden space 145408K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f8e00000)
[46.058s][debug ][gc,heap        ] GC(16)   from space 56832K, 99% used
[0x00000000f9100000,0x00000000fc800370,0x00000000fc880000)
[46.058s][debug ][gc,heap        ] GC(16)   to   space 56832K, 0% used
[0x00000000fc880000,0x00000000fc880000,0x0000000100000000)
[46.058s][debug ][gc,heap        ] GC(16)  ParOldGen       total 329216K, used
149094K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
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[46.058s][debug  ][gc,heap        ] GC(16)   object space 329216K, 45% used
[0x00000000c0000000,0x00000000c91999b0,0x00000000d4180000)
[46.058s][debug  ][gc,heap        ] GC(16)  Metaspace      used 1028K, committed
1216K, reserved 1056768K
[46.058s][debug  ][gc,heap        ] GC(16)   class space    used 83K, committed
192K, reserved 1048576K
[46.058s][debug  ][gc,task,time   ] GC(16) VM-Thread 460467880 460561585
460582976
[48.393s][debug  ][gc,heap        ] GC(17) Heap before GC invocations=18 (full
1):
[48.393s][debug  ][gc,heap        ] GC(17)  PSYoungGen     total 202240K, used
201544K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[48.393s][debug  ][gc,heap        ] GC(17)   eden space 145408K, 99% used
[0x00000000f0000000,0x00000000f8dd2038,0x00000000f8e00000)
[48.393s][debug  ][gc,heap        ] GC(17)   from space 56832K, 99% used
[0x00000000f9100000,0x00000000fc800370,0x00000000fc880000)
[48.393s][debug  ][gc,heap        ] GC(17)   to   space 56832K, 0% used
[0x00000000fc880000,0x00000000fc880000,0x0000000100000000)
[48.393s][debug  ][gc,heap        ] GC(17)  ParOldGen      total 329216K, used
149094K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[48.393s][debug  ][gc,heap        ] GC(17)   object space 329216K, 45% used
[0x00000000c0000000,0x00000000c91999b0,0x00000000d4180000)
[48.393s][debug  ][gc,heap        ] GC(17)  Metaspace      used 1029K, committed
1216K, reserved 1056768K
[48.393s][debug  ][gc,heap        ] GC(17)   class space    used 83K, committed
192K, reserved 1048576K
[48.394s][debug  ][gc,tlab        ] GC(17) TLAB totals: thrds: 1  refills: 1 max:
1 slow allocs: 138 max 138 waste: 21.4% gc: 855832B max: 855832B slow: 0B max: 0B
[48.394s][info   ][gc,start       ] GC(17) Pause Young (Allocation Failure)
[48.394s][debug  ][gc,phases,start] GC(17) Scavenge
[48.396s][debug  ][gc,phases      ] GC(17) Scavenge 2.230ms
[48.396s][debug  ][gc,phases,start] GC(17) Reference Processing
[48.396s][debug  ][gc,ref         ] GC(17) Skipped phase 1 of Reference
Processing: no references
[48.396s][debug  ][gc,ref         ] GC(17) Skipped phase 2 of Reference
Processing: no references
[48.396s][debug  ][gc,ref         ] GC(17) Skipped phase 3 of Reference
Processing: no references
[48.396s][debug  ][gc,ref         ] GC(17) Skipped phase 4 of Reference
Processing: no references
[48.396s][debug  ][gc,phases,ref  ] GC(17) Reference Processing: 0.1ms
[48.396s][debug  ][gc,phases,ref  ] GC(17)   Reconsider SoftReferences: 0.0ms
[48.396s][debug  ][gc,phases,ref  ] GC(17)     SoftRef (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)   Notify Soft/WeakReferences: 0.0ms
[48.396s][debug  ][gc,phases,ref  ] GC(17)     SoftRef (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)     WeakRef (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)     FinalRef (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Total (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)   Notify and keep alive finalizable:
0.0ms
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[48.396s][debug  ][gc,phases,ref  ] GC(17)     FinalRef (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)    Notify PhantomReferences: 0.0ms
[48.396s][debug  ][gc,phases,ref  ] GC(17)     PhantomRef (ms):
skipped
[48.396s][debug  ][gc,phases,ref  ] GC(17)   SoftReference:
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Discovered: 0
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Cleared: 0
[48.396s][debug  ][gc,phases,ref  ] GC(17)   WeakReference:
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Discovered: 0
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Cleared: 0
[48.396s][debug  ][gc,phases,ref  ] GC(17)   FinalReference:
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Discovered: 0
[48.396s][debug  ][gc,phases,ref  ] GC(17)     Cleared: 0
[48.397s][debug  ][gc,phases,ref  ] GC(17)   PhantomReference:
[48.397s][debug  ][gc,phases,ref  ] GC(17)     Discovered: 0
[48.397s][debug  ][gc,phases,ref  ] GC(17)     Cleared: 0
[48.397s][debug  ][gc,phases      ] GC(17) Reference Processing 0.680ms
[48.397s][debug  ][gc,phases,start] GC(17) Weak Processing
[48.397s][debug  ][gc,phases      ] GC(17)   VM Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Total
Min: 0, Avg:  1.3, Max: 8, Diff: 8, Sum: 8, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)   ObjectSynchronizer Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Total
Min: 0, Avg:  0.5, Max: 3, Diff: 3, Sum: 3, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)   JVMTI Tag Weak OopStorage     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)   StringTable Weak            Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Total
Min: 39, Avg: 891.8, Max: 1280, Diff: 1241, Sum: 5351, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)   ResolvedMethodTable Weak     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Total
Min: 0, Avg: 21.7, Max: 64, Diff: 64, Sum: 130, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)   JNI Weak                    Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)     Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
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[48.397s][debug  ][gc,phases      ] GC(17)    StringDedup Table Weak          Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)    StringDedup Requests0 Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)    StringDedup Requests1 Weak      Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)    Weak JFR Old Object Samples     Min:
0.0, Avg:  0.0, Max:  0.0, Diff:  0.0, Sum:  0.0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Dead
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17)      Total
Min: 0, Avg:  0.0, Max: 0, Diff: 0, Sum: 0, Workers: 6
[48.397s][debug  ][gc,phases      ] GC(17) Weak Processing 0.793ms
[48.397s][debug  ][gc,ergo        ] GC(17) AdaptiveSizeStart:  collection: 18
[48.397s][debug  ][gc,ergo        ] GC(17) avg_survived_padded_avg:
63628036.000000
[48.397s][debug  ][gc,ergo        ] GC(17) avg_promoted_padded_avg:
53775192.000000  avg_pretenured_padded_avg: 0.000000  tenuring_thresh: 1
target_size: 63963136
[48.398s][debug  ][gc,age         ] GC(17) Desired survivor size 63963136 bytes,
new threshold 1 (max threshold 15)
[48.398s][debug  ][gc,ergo        ] GC(17)
PSAdaptiveSizePolicy::compute_eden_space_size: costs minor_time: 0.002754
major_cost: 0.000395 mutator_cost: 0.996851 throughput_goal: 0.990000
[48.398s][debug  ][gc,ergo        ] GC(17) Live_space: 387454912 free_space:
344981504
[48.398s][debug  ][gc,ergo        ] GC(17) Old eden_size: 148897792
desired_eden_size: 145752064
[48.398s][debug  ][gc,ergo        ] GC(17) AdaptiveSizeStop: collection: 18
[48.398s][info   ][gc,heap        ] GC(17) PSYoungGen: 201544K(202240K)-
>23552K(194048K) Eden: 145224K(145408K)->0K(137216K) From: 56320K(56832K)-
>23552K(56832K)
[48.398s][info   ][gc,heap        ] GC(17) ParOldGen: 149094K(329216K)-
>149094K(329216K)
[48.398s][info   ][gc,metaspace   ] GC(17) Metaspace: 1029K(1216K)->1029K(1216K)
NonClass: 945K(1024K)->945K(1024K) Class: 83K(192K)->83K(192K)
[48.398s][info   ][gc             ] GC(17) Pause Young (Allocation Failure) 342M-
>168M(511M) 4.155ms
[48.398s][info   ][gc,cpu         ] GC(17) User=0.00s Sys=0.00s Real=0.00s
[48.398s][debug  ][gc,heap        ] GC(17) Heap after GC invocations=18 (full 1):
[48.398s][debug  ][gc,heap        ] GC(17)  PSYoungGen      total 194048K, used
23552K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[48.398s][debug  ][gc,heap        ] GC(17)   eden space 137216K, 0% used
[0x00000000f0000000,0x00000000f0000000,0x00000000f8600000)
```

```
[48.398s][debug  ][gc,heap        ] GC(17)    from space 56832K, 41% used
[0x00000000fc880000,0x00000000fdf80170,0x0000000100000000)
[48.398s][debug  ][gc,heap        ] GC(17)    to   space 62464K, 0% used
[0x00000000f8600000,0x00000000f8600000,0x00000000fc300000)
[48.398s][debug  ][gc,heap        ] GC(17)  ParOldGen      total 329216K, used
149094K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[48.398s][debug  ][gc,heap        ] GC(17)    object space 329216K, 45% used
[0x00000000c0000000,0x00000000c91999b0,0x00000000d4180000)
[48.398s][debug  ][gc,heap        ] GC(17)  Metaspace      used 1029K, committed
1216K, reserved 1056768K
[48.398s][debug  ][gc,heap        ] GC(17)   class space    used 83K, committed
192K, reserved 1048576K
[48.398s][debug  ][gc,task,time   ] GC(17) VM-Thread 483931379 483959126
483980021
[49.666s][info   ][gc,heap,exit   ] Heap
[49.666s][info   ][gc,heap,exit   ]  PSYoungGen      total 194048K, used 107195K
[0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[49.666s][info   ][gc,heap,exit   ]   eden space 137216K, 60% used
[0x00000000f0000000,0x00000000f51aec90,0x00000000f8600000)
[49.666s][info   ][gc,heap,exit   ]   from space 56832K, 41% used
[0x00000000fc880000,0x00000000fdf80170,0x0000000100000000)
[49.667s][info   ][gc,heap,exit   ]   to   space 62464K, 0% used
[0x00000000f8600000,0x00000000f8600000,0x00000000fc300000)
[49.667s][info   ][gc,heap,exit   ]  ParOldGen      total 329216K, used 149094K
[0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[49.667s][info   ][gc,heap,exit   ]   object space 329216K, 45% used
[0x00000000c0000000,0x00000000c91999b0,0x00000000d4180000)
[49.667s][info   ][gc,heap,exit   ]  Metaspace      used 1078K, committed 1216K,
reserved 1056768K
[49.667s][info   ][gc,heap,exit   ]   class space    used 87K, committed 192K,
reserved 1048576K
[49.667s][debug  ][gc,ergo        ] UseAdaptiveSizePolicy actions to meet  ***
reduced footprint ***
[49.667s][debug  ][gc,ergo        ]                       GC overhead (%)
[49.667s][debug  ][gc,ergo        ]    Young generation:       0.28
(attempted to shrink)
[49.667s][debug  ][gc,ergo        ]    Tenured generation:     0.04
(attempted to shrink)
[49.667s][debug  ][gc,ergo        ] Tenuring threshold: (attempted to decrease to
balance GC costs) = 1
[49.667s][debug  ][gc,heap,exit   ] Accumulated young generation GC time
0.1320903 secs
[49.667s][debug  ][gc,heap,exit   ] Accumulated old generation GC time 0.0145628
secs
```

3.4.2 日志分析

年轻代的GC

一共执行了17次Young GC，Young GC发生的原因是年轻代空间不足，触发垃圾回收机制，将存活对象转移到survivor区域
或老年区域。**以GC(10)为例**：

```
[33.309s][debug ][gc,heap      ] GC(10) Heap before GC invocations=11 (full 0):
[33.309s][debug ][gc,heap      ] GC(10) PSYoungGen      total 209408K, used 208168K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[33.310s][debug ][gc,heap      ] GC(10)  eden space 168960K, 99% used [0x00000000f0000000,0x00000000fa449e30,0x00000000fa500000)
[33.310s][debug ][gc,heap      ] GC(10)  from space 40448K, 98% used [0x00000000fd880000,0x00000000fff80270,0x0000000100000000)
[33.310s][debug ][gc,heap      ] GC(10)  to   space 46592K, 0% used [0x00000000fa500000,0x00000000fa500000,0x00000000fd280000)
[33.310s][debug ][gc,heap      ] GC(10) ParOldGen       total 262144K, used 190103K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[33.310s][debug ][gc,heap      ] GC(10)  object space 262144K, 72% used [0x00000000c0000000,0x00000000cb9a5cf8,0x00000000d0000000)
[33.310s][debug ][gc,heap      ] GC(10) Metaspace       used 1026K, committed 1216K, reserved 1056768K
[33.310s][debug ][gc,heap      ] GC(10)  class space    used 83K, committed 192K, reserved 1048576K
```

在GC之前eden区空间使用率为99%，from区使用率为98%，说明年轻代空间不足，无法容纳新建对象，因此触发Young GC进行垃圾回收


```
[33.313s][info  ][gc,heap      ] GC(10) PSYoungGen: 208168K(209408K)->16384K(185856K) Eden: 168231K(168960K)->0K(168960K) From: 39936K(40448K)->16384K(16896K)
[33.313s][info  ][gc,heap      ] GC(10) ParOldGen: 190103K(262144K)->190103K(262144K)
[33.313s][info  ][gc,metaspace ] GC(10) Metaspace: 1026K(1216K)->1026K(1216K) NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[33.313s][info  ][gc           ] GC(10) Pause Young (Allocation Failure) 388M->201M(437M) 3.620ms
[33.313s][info  ][gc,cpu       ] GC(10) User=0.00s Sys=0.00s Real=0.00s
[33.313s][debug ][gc,heap      ] GC(10) Heap after GC invocations=11 (full 0):
[33.314s][debug ][gc,heap      ] GC(10) PSYoungGen      total 185856K, used 16384K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[33.314s][debug ][gc,heap      ] GC(10)  eden space 168960K, 0% used [0x00000000f0000000,0x00000000f0000000,0x00000000fa500000)
[33.314s][debug ][gc,heap      ] GC(10)  from space 16896K, 96% used [0x00000000fa500000,0x00000000fb500100,0x00000000fb580000)
[33.314s][debug ][gc,heap      ] GC(10)  to   space 47616K, 0% used [0x00000000fd180000,0x00000000fd180000,0x0000000100000000)
[33.314s][debug ][gc,heap      ] GC(10) ParOldGen       total 262144K, used 190103K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[33.314s][debug ][gc,heap      ] GC(10)  object space 262144K, 72% used [0x00000000c0000000,0x00000000cb9a5cf8,0x00000000d0000000)
[33.314s][debug ][gc,heap      ] GC(10) Metaspace       used 1026K, committed 1216K, reserved 1056768K
```

垃圾回收后eden区域由168231K(168960k)变为0K(168960k)，from区域由39936K(40448K)变为16384K(16896K)，老年代不变，堆空间由388M变为201M。说明本次垃圾回收将eden中的存活对象移动到from区，并清除年轻代中的垃圾对象，没有新对象加入老年代。

Full GC

一共进行了1次Full GC，Full GC的原因是老年代的空间不足，触发全局的垃圾的回收机制，同时回收年轻代和老年代的垃圾对象，并按需拓展堆内存空间。

以GC(12)为例:


```
[36.007s][debug ][gc,heap      ] GC(12) Heap before GC invocations=13 (full 1):
[36.007s][debug ][gc,heap      ] GC(12) PSYoungGen      total 205312K, used 47104K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[36.007s][debug ][gc,heap      ] GC(12)  eden space 157696K, 0% used [0x00000000f0000000,0x00000000f0000000,0x00000000f9a00000)
[36.007s][debug ][gc,heap      ] GC(12)  from space 47616K, 98% used [0x00000000fd180000,0x00000000fff802e0,0x0000000100000000)
[36.007s][debug ][gc,heap      ] GC(12)  to   space 52224K, 0% used [0x00000000f9a00000,0x00000000f9a00000,0x00000000fcd00000)
[36.007s][debug ][gc,heap      ] GC(12) ParOldGen       total 262144K, used 224919K [0x00000000c0000000, 0x00000000d0000000, 0x00000000f0000000)
[36.007s][debug ][gc,heap      ] GC(12)  object space 262144K, 85% used [0x00000000c0000000,0x00000000cdba5f18,0x00000000d0000000)
[36.007s][debug ][gc,heap      ] GC(12) Metaspace       used 1026K, committed 1216K, reserved 1056768K
[36.007s][debug ][gc,heap      ] GC(12)  class space    used 83K, committed 192K, reserved 1048576K
```

在GC之前eden区空间使用率为0%，from区使用率为98%，老年代使用率85%，说明老年代空间不足，无法容纳新增的对象，因此触发Full GC进行垃圾回收


```
[36.022s][debug ][gc           ] GC(12) Expanding ParOldGen from 262144K by 67072K to 329216K
[36.022s][debug ][gc,ergo      ] GC(12) AdaptiveSizeStop: collection: 13
[36.022s][info  ][gc,heap      ] GC(12) PSYoungGen: 47104K(205312K)->0K(209920K) Eden: 0K(157696K)->0K(157696K) From: 47104K(47616K)->0K(52224K)
[36.022s][info  ][gc,heap      ] GC(12) ParOldGen: 224919K(262144K)->83557K(329216K)
[36.022s][info  ][gc,metaspace ] GC(12) Metaspace: 1026K(1216K)->1026K(1216K) NonClass: 942K(1024K)->942K(1024K) Class: 83K(192K)->83K(192K)
[36.022s][info  ][gc           ] GC(12) Pause Full (Ergonomics) 265M->81M(526M) 14.670ms
[36.022s][info  ][gc,cpu       ] GC(12) User=0.00s Sys=0.02s Real=0.01s
[36.022s][debug ][gc,heap      ] GC(12) Heap after GC invocations=13 (full 1):
[36.022s][debug ][gc,heap      ] GC(12) PSYoungGen      total 209920K, used 0K [0x00000000f0000000, 0x0000000100000000, 0x0000000100000000)
[36.022s][debug ][gc,heap      ] GC(12)  eden space 157696K, 0% used [0x00000000f0000000,0x00000000f0000000,0x00000000f9a00000)
[36.022s][debug ][gc,heap      ] GC(12)  from space 52224K, 0% used [0x00000000f9a00000,0x00000000f9a00000,0x00000000fcd00000)
[36.022s][debug ][gc,heap      ] GC(12)  to   space 52224K, 0% used [0x00000000fcd00000,0x00000000fcd00000,0x0000000100000000)
[36.022s][debug ][gc,heap      ] GC(12) ParOldGen       total 329216K, used 83557K [0x00000000c0000000, 0x00000000d4180000, 0x00000000f0000000)
[36.022s][debug ][gc,heap      ] GC(12)  object space 329216K, 25% used [0x00000000c0000000,0x00000000c51995b0,0x00000000d4180000)
[36.022s][debug ][gc,heap      ] GC(12) Metaspace       used 1026K, committed 1216K, reserved 1056768K
```

由于Full GC同时对年轻代和老年代进行垃圾回收，因此两个区域的空间使用情况均发生变化。垃圾回收后from区域由47104K(47616K)变为0K(52224K)，老年代由224919K(262144K)变为83557K(329216K)，堆空间由265M变为81M。本次垃圾回收，JVM尝试将from中的存活对象移入老年代，但老年代的空间不足，因此触发了空间拓展，老年代的空间由262144K变为329216K，之后通过标记-清除法清理老年代中垃圾对象。

3.4.3 性能指标

GC配置	代码运行时间	GC运行时间	GC最大延迟	吞吐率	Young GC次数	Full GC次数
ParallelGC	49667ms	149.133ms	19.017ms	99.701%	17	1

4. GC性能优化

4.1 年轻代大小对GC性能的影响

当年轻代空间使用率达到某一个阈值时，JVM会主动触发Young GC进行垃圾回收，通过增大年轻代的内存空间，可以减少GC的频率。

实验配置如下:

```
-XX:+UseParallelGC
-Xmx1024m
-Xms1024m
-Xmn新生代大小m
-XX:+PrintGCDetails
-Xlog:gc*=debug:file=./log/gcParallel_new_xxx.log
```

实验结果如下表所示:

堆内存大小	年轻代大小	代码运行时间	GC运行时间	GC最大延迟	吞吐率	Young GC次数	Full GC次数
1024M	128M	48355ms	459.256ms	67.149ms	99.059%	45	2
1024M	256M	47835ms	123.68ms	11.498ms	99.742%	17	0
1024M	384M	47621ms	74.260ms	12.546ms	99.844%	11	0
1024M	512M	47722ms	69.994ms	14.179ms	99.854%	8	0

结论如下:

从表中可以看出，在堆内存不变的情况下，随着年轻的增大，GC的频率显著下降，吞吐率有所提升。但年轻代不是越大越好，当年轻代的大小达到一定阈值后，GC的最大延迟反而回随着年轻代增大而提升，因此需要配置合理的年轻代大小。

4.2 幸存区大小对GC性能的影

当年轻代进行GC时，存活对象会先移动到survivor区中，经过多次GC仍然存在于survivor区中的幸存对象会被移动到老年代，当survivor区满时，也会触发GC进行垃圾回收。因此，合理的survivor区大小，能够保留尽可能多的存活对象，减少GC的频率。

实验配置如下:

```
-XX:+UseParallelGC
-Xmx1024m
-Xms1024m
-Xmn256m
-XX:SurvivorRatio=年轻代与survivor的比例
-XX:+PrintGCDetails
-Xlog:gc*=debug:file=./log/gcParallel_survivor_xxx.log
```

实验结果如下表所示:

年轻代	survivor 区域:年轻代	代码运行时间	GC运行时间	GC最大延迟	吞吐率	Young GC次数	Full GC 次数
256M	2:4	47705ms	179.447ms	67.149ms	99.625%	23	0
256M	2:6	47935ms	139.860ms	15.785ms	99.709%	15	0
256M	2:8	47438ms	109.087ms	26.049ms	99.771%	14	0
256M	2:10	47736ms	112.413ms	13.562ms	99.765%	14	0

结论如下:

从表中可以看出，survivor对GC性能的影响不大，但考虑到survivor与eden区共享年轻代的内存，为了保证eden有充足的空间防止频繁的进行Young GC，survivor大小应该小于eden。

4.3 堆内存大小对GC性能的影响

堆空间决定了年轻代和老年代的可分配空间，当堆空间较小时，JVM需要频繁的进行GC释放堆空间，合理的堆空间有助于提高GC的性能。

为了方便实验将代码修改如下:

```java
import java.time.LocalDateTime;
import java.util.ArrayList;
import java.util.List;

/**
 * GC测试用例
 */
public class TestGC {
    public static void main(String[] args) throws InterruptedException {
        System.out.println("===========================GC测试用例
=========================");
        long start= System.currentTimeMillis();
        List<byte[]> list = new ArrayList<>();
        int maxIterations = 3000;
        for(int i=1;i<=maxIterations;i++){
            //新增1M
            list.add(new byte[10*1024*1024]);
            //每隔100 clear一次
            if(i%100==0){
                list.clear();
                System.out.printf("iteration:%5d\t\t清空List\n",i);
            }
            //休眠10ms
            Thread.sleep(10);
        }
        long end= System.currentTimeMillis();
        System.out.printf("耗费时间"+(end-start)+'s');
        System.out.println("测试完成");
    }
}
```

实验配置如下:

```
-XX:+UseParallelGC
-Xmx堆空间大小m
-Xms堆空间大小m
-Xmn256m
-XX:+PrintGCDetails
-Xlog:gc*=debug:file=./log/gcParallel_heap_xxxx.log
```

实验结果如下表所示:

堆内存大小	年轻代大小	代码运行时间	GC运行时间	GC最大延迟	吞吐率	Young GC次数	Full GC次数
2048M	256M	53112ms	5267.310ms	123.484ms	90.977%	162	31
3072M	256M	51736ms	3962.964ms	185.612ms	92.885%	161	20
4096M	256M	52495ms	4651.435ms	299.785ms	91.860%	164	26
8192M	256M	53338ms	5396.496ms	813.341ms	90.812%	166	22

结论如下:

堆空间存在一个最优大小，不能无限的增大，在没发生堆溢出的情况下，Young GC的次数取决于年轻代的大小，与堆空间无关；堆空间主要影响Full GC的频率。

4.4 线程数对GC性能的影响

Parallel GC采用多线程的方式进行GC，提高线程的数量，可以充分利用CPU的资源，改善GC的效率。

实验配置如下:

```
-XX:+UseParallelGC
-Xmx1024m
-Xms1024m
-Xmn256m
-XX:ParallelGCThreads=线程数
-XX:+PrintGCDetails
-Xlog:gc*=debug:file=./log/gcParallel_parallel_xxxx.log
```

实验结果如下表所示:

线程数	堆空间	代码运行时间	GC运行时间	GC最大延迟	吞吐率	Young GC次数	Full GC次数
6	2048M	53155ms	5211.111ms	118.715ms	91.072%	164	31
8	2048M	53067ms	5172.987ms	118.895ms	91.118%	164	31
10	2048M	52949ms	5187.480ms	125.105ms	91.077%	132	31
12	2048M	52892ms	5197.726ms	121.270ms	91.052%	162	31

结论如下:

从实验结果可以看出,线程数对GC性能影响并不明显,在新生代和堆空间合理的情况下,不同线程数的GC性能差距不大。

5. 结论

对Parallel GC性能影响最大的是年轻代大小和堆空间,在实际生产中应该设置合理的年轻代大小和堆空间大小。