## 128mb

```
1  java -XX:+UseSerialGC -Xms128m -Xmx128m -XX:+PrintGCDetails week_02.housework1.GCLogAnalysis
```

| Cause | Count | Avg Time | Max Time | Total Time |
|---|---|---|---|---|
| Allocation Failure | 9 | 25.6 ms | 30.0 ms | 230 ms |
| Full GC - Allocation Failure | 23 | 6.96 ms | 30.0 ms | 160 ms |

### Total GC stats

| | |
|---|---|
| Total GC count ❓ | 32 |
| Total reclaimed bytes ❓ | 329 mb |
| Total GC time ❓ | 230 ms |
| Avg GC time ❓ | 7.19 ms |
| GC avg time std dev | 8.00 ms |
| GC min/max time | 0 / 30.0 ms |
| GC Interval avg time ❓ | n/a |

### Minor GC stats

| | |
|---|---|
| Minor GC count ❓ | 7 |
| Minor GC reclaimed ❓ | 158.82 mb |
| Minor GC total time | 40.0 ms |
| Minor GC avg time ❓ | 5.71 ms |
| Minor GC avg time std dev | 4.95 ms |
| Minor GC min/max time | 0 / 10.0 ms |
| Minor GC Interval avg ❓ | n/a |

### Full GC stats

| | |
|---|---|
| Full GC Count | 25 |
| Full GC reclaimed ❓ | 170.18 mb |
| Full GC total time | 190 ms |
| Full GC avg time ❓ | 7.60 ms |
| Full GC avg time std dev | 8.62 ms |
| Full GC min/max time | 0 / 30.0 ms |
| Full GC Interval avg ❓ | n/a |

## 256mb

```
1  java -XX:+UseSerialGC -Xms256m -Xmx256m -XX:+PrintGCDetails week_02.housework1.GCLogAnalysis
```

| Cause | Count | Avg Time | Max Time | Total Time |
|---|---|---|---|---|
| Allocation Failure | 9 | 88.9 ms | 50.0 ms | 800 ms |
| Full GC - Allocation Failure | 34 | 18.2 ms | 50.0 ms | 620 ms |

### Total GC stats

| | |
|---|---|
| Total GC count ❓ | 43 |
| Total reclaimed bytes ❓ | 898.34 mb |
| Total GC time ❓ | 800 ms |
| Avg GC time ❓ | 18.6 ms |
| GC avg time std dev | 14.1 ms |
| GC min/max time | 0 / 50.0 ms |
| GC Interval avg time ❓ | n/a |

### Minor GC stats

| | |
|---|---|
| Minor GC count ❓ | 7 |
| Minor GC reclaimed ❓ | 315.48 mb |
| Minor GC total time | 120 ms |
| Minor GC avg time ❓ | 17.1 ms |
| Minor GC avg time std dev | 4.52 ms |
| Minor GC min/max time | 10.0 ms / 20.0 ms |
| Minor GC Interval avg ❓ | n/a |

### Full GC stats

| | |
|---|---|
| Full GC Count | 36 |
| Full GC reclaimed ❓ | 582.86 mb |
| Full GC total time | 680 ms |
| Full GC avg time ❓ | 18.9 ms |
| Full GC avg time std dev | 15.2 ms |
| Full GC min/max time | 0 / 50.0 ms |
| Full GC Interval avg ❓ | n/a |

## 512mb

```
1  java -XX:+UseSerialGC -Xms512m -Xmx512m -XX:+PrintGCDetails week_02.housework1.GCLogAnalysis
```

| Cause | Count | Avg Time | Max Time | Total Ti |
|---|---|---|---|---|
| Allocation Failure | 16 | 36.9 ms | 60.0 ms | 590 m |

### Total GC stats

| | |
|---|---|
| Total GC count | 16 |
| Total reclaimed bytes | 1.79 gb |
| Total GC time | 590 ms |
| Avg GC time | 36.9 ms |
| GC avg time std dev | 16.1 ms |
| GC min/max time | 0 / 60.0 ms |
| GC Interval avg time | n/a |

### Minor GC stats

| | |
|---|---|
| Minor GC count | 10 |
| Minor GC reclaimed | 932.03 mb |
| Minor GC total time | 270 ms |
| Minor GC avg time | 27.0 ms |
| Minor GC avg time std dev | 11.9 ms |
| Minor GC min/max time | 0 / 40.0 ms |
| Minor GC Interval avg | n/a |

### Full GC stats

| | |
|---|---|
| Full GC Count | 6 |
| Full GC reclaimed | 904.62 mb |
| Full GC total time | 320 ms |
| Full GC avg time | 53.3 ms |
| Full GC avg time std dev | 4.71 ms |
| Full GC min/max time | 50.0 ms / 60.0 ms |
| Full GC Interval avg | n/a |

## 1024mb

```
1  java -XX:+UseSerialGC -Xms1g -Xmx1g -XX:+PrintGCDetails week_02.housework1.GCLogAnalysis
```

| Cause | Count | Avg Time | Max Time | Total Time |
|---|---|---|---|---|
| Allocation Failure | 9 | 55.6 ms | 60.0 ms | 500 ms |

### Total GC stats

| | |
|---|---|
| Total GC count | 9 |
| Total reclaimed bytes | n/a |
| Total GC time | 500 ms |
| Avg GC time | 55.6 ms |
| GC avg time std dev | 4.97 ms |
| GC min/max time | 50.0 ms / 60.0 ms |
| GC Interval avg time | n/a |

### Minor GC stats

| | |
|---|---|
| Minor GC count | 9 |
| Minor GC reclaimed | 1.72 gb |
| Minor GC total time | 500 ms |
| Minor GC avg time | 55.6 ms |
| Minor GC avg time std dev | 4.97 ms |
| Minor GC min/max time | 50.0 ms / 60.0 ms |
| Minor GC Interval avg | n/a |

### Full GC stats

| | |
|---|---|
| Full GC Count | 0 |
| Full GC reclaimed | n/a |
| Full GC total time | n/a |
| Full GC avg time | n/a |
| Full GC avg time std dev | n/a |
| Full GC min/max time | n/a |
| Full GC Interval avg | n/a |

## 总结

SerialGC 由于是单线程进行GC,随着堆内存的变大,GC的时间也变长.STW的时间就越久.不适合server服务的使用.