

SoftEngDC A2 Performance Analysis

Overall thoughts

- **NOTE:** I am sleeping the thread for 10 seconds before all tests. In order to connect JConsole to the process. Then also sleeping for 5 seconds after each test, to try and separate the parameterized tests
- **MemAppender**
 - Using a linked list data structure is far faster as it is $\theta(1)$. Compare that to a array list $\theta(n)$, struggle and slow at with a higher number of logs
 - In my testing (not sleeping the threads) linked list test completes in $\approx 2-3$ seconds
 - Where as array list takes $\approx 30-40$ sec. It completes the first 6 tests "as fast" as the linked list, but on the 7 (1,000,000 logs) its slows to a crawl (relatively speaking)
 - This lines up with their respective big O notation
 - In the the logs, linked list moment to moment "seems" to use slightly more memory. But on the JConsole graph, it used slightly less on the average
- **ConsoleAppender vs FileAppender**
 - The console appender uses more memory (assuming due to overhead of outputting to console)
 - The file appender is slower in all but the final test, but is more memory efficient. It is also more stable in its memory average (as seen in the respective graphs)
 - I'm assuming file appender "slowness" is due to the time taken to write to a file

- In my testing, file appender is always faster. This was because it doesn't have the overhead of outputting to the console
- File appender is only slower (in all but the last test) when the thread is being slept for recording
- **PatternLayout vs VelocityLayout**
 - Linked list was used as the data structure for MemAppender, this was to give the layouts the best possible comparison
 - Layout test used all three appenders
 - VelocityLayout, moment to moment used more memory. I assuming this is due to the greater overhead this class has using velocity
 - In the graphs, the average had PatternLayout surprisingly using more total memory
 - PatternLayout was the faster of the two for 2/3 tests. Where on the 3rd test (console appender), it was slower on average. Not quite sure why that would be?
 - Running the test again the result continues
 - But re-running it without sleeping the thread. The results become more expected with PatternLayout taking 3/3

Bottlenecks found before report

I also two bottlenecks in my code. One in `VelocityLayout` , the other in `StressTest` . Thought they where interesting enough to share

- In `VelocityLayout` , every time a log was being formatted, it was reaching out to update the template, assuming that it had being updated

```

• @Override
  public String format(LoggingEvent event) {
    tmpl = velocityEngine.getTemplate(TEMPLATE);
    ...
  }

```

- I then moved it to update only when the pattern is updated

```

• public void setPattern(String pattern) {
  this.pattern = pattern;
}

```

```

createTemplateFile();
updateTpl();
}

private void updateTpl() {
    tpl = velocityEngine.getTemplate(TEMPLATE);
}

```

- This improved this test from ≈ 54 sec (for the three appenders being tested) to ≈ 8 secs
- A roughly 85% increase in performance
- In the parameterized tests of `StressTest`, i was creating a new a new appender in each test
 - I forget that loggers can have more than one, so the console & file loggers where outputting for each appender
 - This slowed everything right down at the end of the test
 - So I simply added the logger only once at the start

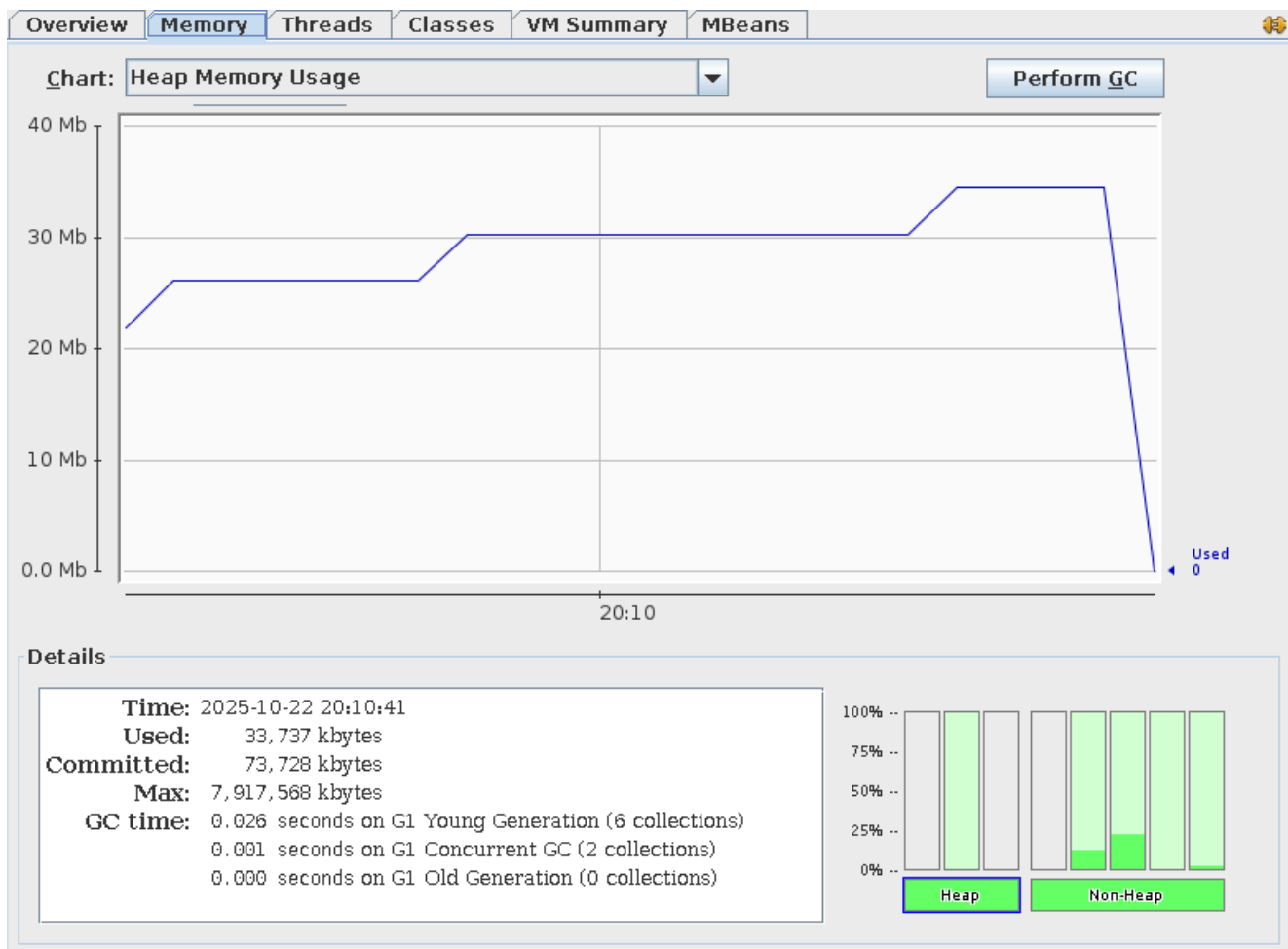
```

Logger logger = Logger.getLogger("MemLogger");
if(maxSize <= 1) // Set up Logger once
{
    logger.addAppender(new ConsoleAppender(layout));
    logger.setLevel(Level.INFO);
}

```

- Forget to do a before and after for this though 😊

MemAppender With ArrayList



[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running appender.StressTest

=== MemAppender With ArrayList Performance Test - (1) ===

Before logging:

Used Memory: 10 MB (10835 KB)

Free Memory: 125 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 10 MB (10835 KB)

Free Memory: 125 MB

Total Memory: 136 MB

After logging:

Used Memory: 12 MB (12916 KB)

Free Memory: 123 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 11 ms

Logs processed: 10001

Logs stored: 1
Logs discarded: 10000

=== MemAppender With ArrayList Performance Test - (10) ===

Before logging:

Used Memory: 14 MB (14681 KB)
Free Memory: 121 MB
Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 14 MB (14681 KB)
Free Memory: 121 MB
Total Memory: 136 MB

After logging:

Used Memory: 15 MB (16356 KB)
Free Memory: 120 MB
Total Memory: 136 MB

Final stats:

Approximate test duration: 3 ms
Logs processed: 10010
Logs stored: 10
Logs discarded: 10000

=== MemAppender With ArrayList Performance Test - (100) ===

Before logging:

Used Memory: 16 MB (16684 KB)
Free Memory: 119 MB
Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 16 MB (16684 KB)
Free Memory: 119 MB
Total Memory: 136 MB

After logging:

Used Memory: 17 MB (17558 KB)
Free Memory: 118 MB
Total Memory: 136 MB

Final stats:

Approximate test duration: 2 ms
Logs processed: 10100
Logs stored: 100
Logs discarded: 10000

=== MemAppender With ArrayList Performance Test - (1000) ===

Before logging:

Used Memory: 17 MB (17558 KB)

Free Memory: 118 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 18 MB (18432 KB)

Free Memory: 117 MB

Total Memory: 136 MB

After logging:

Used Memory: 18 MB (19307 KB)

Free Memory: 117 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 2 ms

Logs processed: 11000

Logs stored: 1000

Logs discarded: 10000

=== MemAppender With ArrayList Performance Test - (10000) ===

Before logging:

Used Memory: 18 MB (19307 KB)

Free Memory: 117 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 20 MB (21327 KB)

Free Memory: 115 MB

Total Memory: 136 MB

After logging:

Used Memory: 22 MB (22529 KB)

Free Memory: 113 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 5 ms

Logs processed: 20000

Logs stored: 10000

Logs discarded: 10000

=== MemAppender With ArrayList Performance Test - (100000) ===

Before logging:

Used Memory: 22 MB (22529 KB)

Free Memory: 113 MB

Total Memory: 136 MB
Inbetween logging (After MaxSize reached, before overflow):
Used Memory: 36 MB (37711 KB)
Free Memory: 99 MB
Total Memory: 136 MB
After logging:
Used Memory: 42 MB (43555 KB)
Free Memory: 93 MB
Total Memory: 136 MB
Final stats:
Approximate test duration: 128 ms
Logs processed: 150000
Logs stored: 100000
Logs discarded: 50000

=== MemAppender With ArrayList Performance Test - (1000000) ===

Before logging:
Used Memory: 43 MB (44154 KB)
Free Memory: 92 MB
Total Memory: 136 MB
Inbetween logging (After MaxSize reached, before overflow):
Used Memory: 157 MB (161543 KB)
Free Memory: 406 MB
Total Memory: 564 MB
After logging:
Used Memory: 223 MB (228535 KB)
Free Memory: 340 MB
Total Memory: 564 MB
Final stats:
Approximate test duration: 41234 ms
Logs processed: 1500000
Logs stored: 1000000
Logs discarded: 500000

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 86.468 s - in appender.StressTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

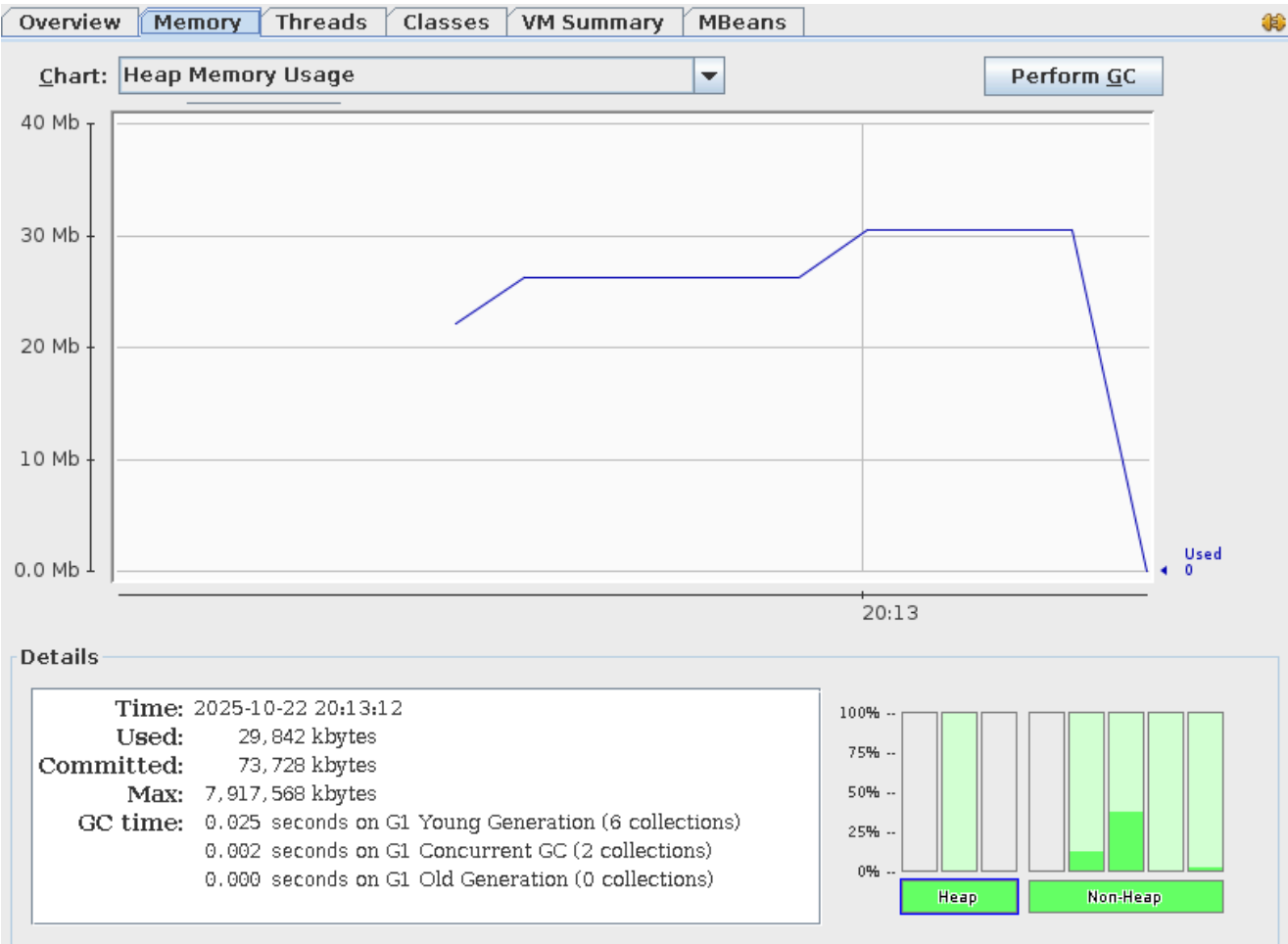
[INFO] -----

[INFO] Total time: 01:28 min

[INFO] Finished at: 2025-10-22T20:10:43+13:00

[INFO] -----

MemAppender With LinkedList



[INFO] -----

[INFO] T E S T S

[INFO] -----

[INFO] Running appender.StressTest

=== MemAppender With LinkedList Performance Test - (1) ===

Before logging:

Used Memory: 10 MB (10835 KB)

Free Memory: 125 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 10 MB (10835 KB)

Free Memory: 125 MB

Total Memory: 136 MB

After logging:

Used Memory: 13 MB (13381 KB)

Free Memory: 122 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 12 ms

Logs processed: 10001

Logs stored: 1

Logs discarded: 10000

=== MemAppender With LinkedList Performance Test - (10) ===

Before logging:

Used Memory: 13 MB (14259 KB)

Free Memory: 122 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 13 MB (14259 KB)

Free Memory: 122 MB

Total Memory: 136 MB

After logging:

Used Memory: 15 MB (16356 KB)

Free Memory: 120 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 3 ms

Logs processed: 10010

Logs stored: 10

Logs discarded: 10000

=== MemAppender With LinkedList Performance Test - (100) ===

Before logging:

Used Memory: 16 MB (16602 KB)

Free Memory: 119 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 16 MB (16602 KB)

Free Memory: 119 MB

Total Memory: 136 MB

After logging:

Used Memory: 17 MB (18351 KB)

Free Memory: 118 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 3 ms

Logs processed: 10100

Logs stored: 100

Logs discarded: 10000

=== MemAppender With LinkedList Performance Test - (1000) ===

Before logging:

Used Memory: 17 MB (18351 KB)

Free Memory: 118 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 17 MB (18351 KB)

Free Memory: 118 MB

Total Memory: 136 MB

After logging:

Used Memory: 19 MB (19578 KB)

Free Memory: 116 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 2 ms

Logs processed: 11000

Logs stored: 1000

Logs discarded: 10000

=== MemAppender With LinkedList Performance Test - (10000) ===

Before logging:

Used Memory: 19 MB (19578 KB)

Free Memory: 116 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 20 MB (21327 KB)

Free Memory: 115 MB

Total Memory: 136 MB

After logging:

Used Memory: 22 MB (23321 KB)

Free Memory: 113 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 3 ms

Logs processed: 20000

Logs stored: 10000

Logs discarded: 10000

=== MemAppender With LinkedList Performance Test - (100000) ===

Before logging:

Used Memory: 22 MB (23321 KB)

Free Memory: 113 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 38 MB (39460 KB)

Free Memory: 97 MB

Total Memory: 136 MB

After logging:

Used Memory: 45 MB (46777 KB)

Free Memory: 90 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 25 ms

Logs processed: 150000

Logs stored: 100000

Logs discarded: 50000

=== MemAppender With LinkedList Performance Test - (1000000) ===

Before logging:

Used Memory: 45 MB (46777 KB)

Free Memory: 90 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 163 MB (167564 KB)

Free Memory: 236 MB

Total Memory: 400 MB

After logging:

Used Memory: 245 MB (251873 KB)

Free Memory: 154 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 435 ms

Logs processed: 1500000

Logs stored: 1000000

Logs discarded: 500000

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 45.58 s - in appender.StressTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

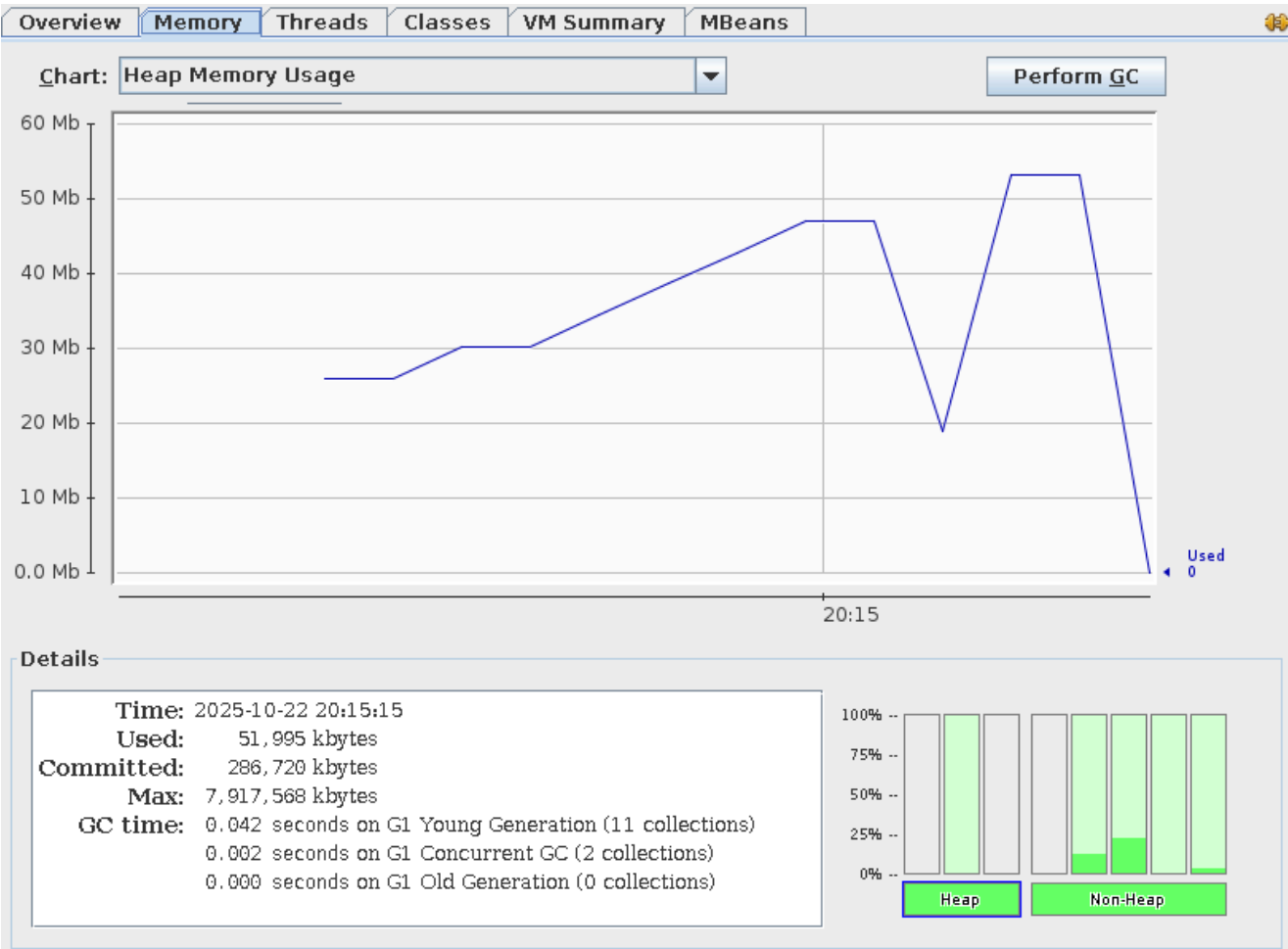
[INFO] -----

[INFO] Total time: 47.205 s

[INFO] Finished at: 2025-10-22T20:13:16+13:00

[INFO] -----

Console Appender



[INFO]

[INFO] -----

[INFO] T E S T S

[INFO] -----

[INFO] Running appender.StressTest

=== Console Appender Performance Test - (1) ===

Before logging:

Used Memory: 10 MB (10836 KB)

Free Memory: 125 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 10 MB (10836 KB)

Free Memory: 125 MB

Total Memory: 136 MB

After logging:

Used Memory: 21 MB (22202 KB)

Free Memory: 114 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 54 ms

=== Console Appender Performance Test - (10) ===

Before logging:

Used Memory: 22 MB (23092 KB)

Free Memory: 113 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 22 MB (23092 KB)

Free Memory: 113 MB

Total Memory: 136 MB

After logging:

Used Memory: 30 MB (31268 KB)

Free Memory: 105 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 12 ms

=== Console Appender Performance Test - (100) ===

Before logging:

Used Memory: 31 MB (31866 KB)

Free Memory: 104 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 31 MB (31866 KB)

Free Memory: 104 MB

Total Memory: 136 MB

After logging:

Used Memory: 38 MB (39460 KB)

Free Memory: 97 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 5 ms

=== Console Appender Performance Test - (1000) ===

Before logging:

Used Memory: 39 MB (40058 KB)

Free Memory: 96 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 39 MB (40933 KB)

Free Memory: 96 MB

Total Memory: 136 MB

After logging:

Used Memory: 47 MB (49125 KB)

Free Memory: 88 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 8 ms

=== Console Appender Performance Test - (10000) ===

Before logging:

Used Memory: 47 MB (49125 KB)

Free Memory: 88 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 7 MB (8154 KB)

Free Memory: 128 MB

Total Memory: 136 MB

After logging:

Used Memory: 15 MB (16346 KB)

Free Memory: 120 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 10 ms

=== Console Appender Performance Test - (100000) ===

Before logging:

Used Memory: 16 MB (16639 KB)

Free Memory: 119 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 49 MB (50580 KB)

Free Memory: 86 MB

Total Memory: 136 MB

After logging:

Used Memory: 36 MB (37601 KB)

Free Memory: 99 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 113 ms

=== Console Appender Performance Test - (1000000) ===

Before logging:

Used Memory: 37 MB (38095 KB)

Free Memory: 98 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 109 MB (112358 KB)

Free Memory: 90 MB

Total Memory: 200 MB

After logging:

Used Memory: 45 MB (46891 KB)

Free Memory: 154 MB

Total Memory: 200 MB

Final stats:

Approximate test duration: 1232 ms

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 46.497 s - in
appender.StressTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

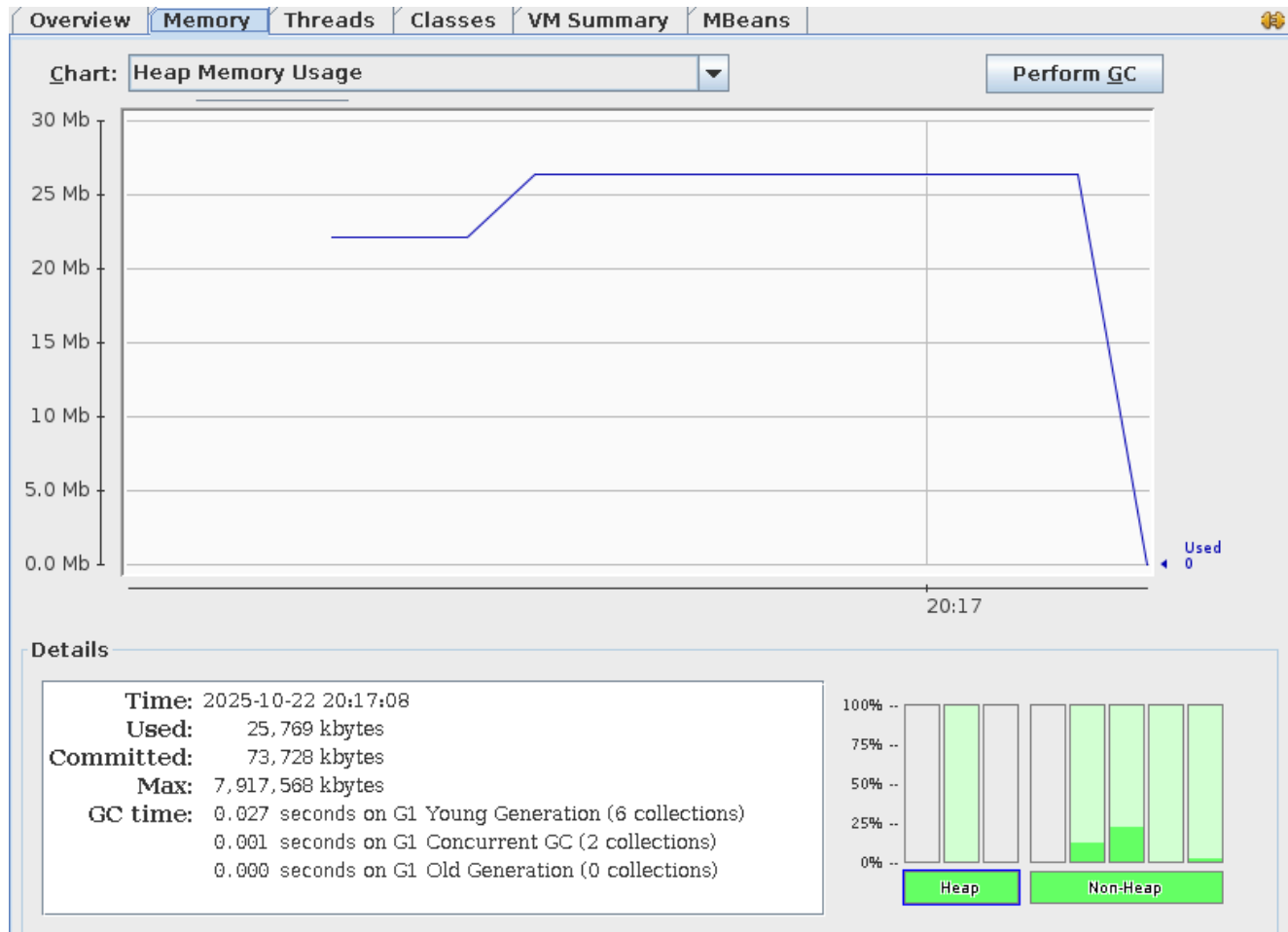
[INFO] -----

[INFO] Total time: 48.634 s

[INFO] Finished at: 2025-10-22T20:15:15+13:00

[INFO] -----

File Appender



[INFO] -----

[INFO] T E S T S

[INFO] -----

[INFO] Running appender.StressTest

=== File Appender Performance Test - (1) ===

Before logging:

Used Memory: 10 MB (10833 KB)

Free Memory: 125 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 10 MB (10833 KB)

Free Memory: 125 MB

Total Memory: 136 MB

After logging:

Used Memory: 15 MB (15482 KB)

Free Memory: 120 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 32 ms

=== File Appender Performance Test - (10) ===

Before logging:

Used Memory: 16 MB (17246 KB)

Free Memory: 119 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 16 MB (17246 KB)

Free Memory: 119 MB

Total Memory: 136 MB

After logging:

Used Memory: 19 MB (19578 KB)

Free Memory: 116 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 9 ms

=== File Appender Performance Test - (100) ===

Before logging:

Used Memory: 19 MB (19578 KB)

Free Memory: 116 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 19 MB (19578 KB)

Free Memory: 116 MB

Total Memory: 136 MB

After logging:

Used Memory: 21 MB (22200 KB)

Free Memory: 114 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 8 ms

=== File Appender Performance Test - (1000) ===

Before logging:

Used Memory: 22 MB (23073 KB)

Free Memory: 113 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 22 MB (23073 KB)

Free Memory: 113 MB

Total Memory: 136 MB

After logging:

Used Memory: 24 MB (25422 KB)

Free Memory: 111 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 10 ms

=== File Appender Performance Test - (10000) ===

Before logging:

Used Memory: 24 MB (25422 KB)

Free Memory: 111 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 27 MB (28644 KB)

Free Memory: 108 MB

Total Memory: 136 MB

After logging:

Used Memory: 30 MB (31265 KB)

Free Memory: 105 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 16 ms

=== File Appender Performance Test - (100000) ===

Before logging:

Used Memory: 30 MB (31265 KB)

Free Memory: 105 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 8 MB (8978 KB)

Free Memory: 127 MB

Total Memory: 136 MB

After logging:

Used Memory: 21 MB (22091 KB)

Free Memory: 114 MB

Total Memory: 136 MB
Final stats:
Approximate test duration: 120 ms

=== File Appender Performance Test - (1000000) ===

Before logging:

Used Memory: 21 MB (22385 KB)

Free Memory: 114 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 62 MB (63577 KB)

Free Memory: 73 MB

Total Memory: 136 MB

After logging:

Used Memory: 63 MB (65214 KB)

Free Memory: 72 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 1064 ms

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 46.319 s - in appender.StressTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 7, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

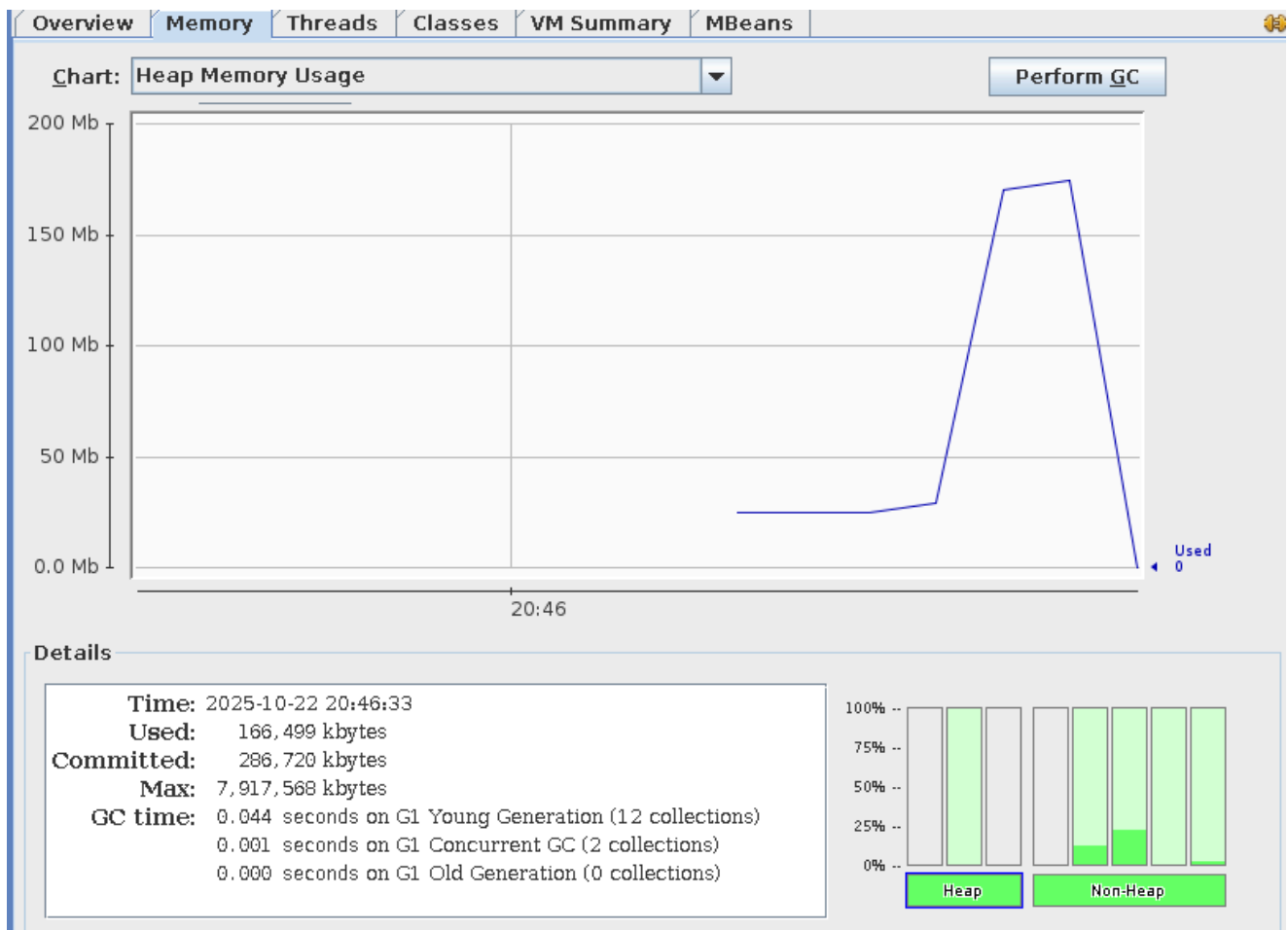
[INFO] -----

[INFO] Total time: 48.072 s

[INFO] Finished at: 2025-10-22T20:17:09+13:00

[INFO] -----

Pattern Layout



[INFO]

[INFO] -----

[INFO] T E S T S

[INFO] -----

[INFO] Running appender.StressTest

=== PatternLayout Performance Test ===

=== MemAppender With PatternLayout Performance Test - (1) ===

Before logging:

Used Memory: 7 MB (8164 KB)

Free Memory: 128 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 7 MB (8164 KB)

Free Memory: 128 MB

Total Memory: 136 MB

After logging:

Used Memory: 10 MB (10404 KB)

Free Memory: 125 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 14 ms

Logs processed: 10001

Logs stored: 1
Logs discarded: 10000

=== MemAppender With PatternLayout Performance Test - (10) ===

Before logging:

Used Memory: 10 MB (10404 KB)
Free Memory: 125 MB
Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 10 MB (10404 KB)
Free Memory: 125 MB
Total Memory: 136 MB

After logging:

Used Memory: 11 MB (11386 KB)
Free Memory: 124 MB
Total Memory: 136 MB

Final stats:

Approximate test duration: 5 ms
Logs processed: 10010
Logs stored: 10
Logs discarded: 10000

=== MemAppender With PatternLayout Performance Test - (100) ===

Before logging:

Used Memory: 11 MB (11386 KB)
Free Memory: 124 MB
Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 11 MB (11386 KB)
Free Memory: 124 MB
Total Memory: 136 MB

After logging:

Used Memory: 12 MB (13134 KB)
Free Memory: 123 MB
Total Memory: 136 MB

Final stats:

Approximate test duration: 6 ms
Logs processed: 10100
Logs stored: 100
Logs discarded: 10000

=== MemAppender With PatternLayout Performance Test - (1000) ===

Before logging:

Used Memory: 12 MB (13134 KB)

Free Memory: 123 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 12 MB (13134 KB)

Free Memory: 123 MB

Total Memory: 136 MB

After logging:

Used Memory: 14 MB (14883 KB)

Free Memory: 121 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 2 ms

Logs processed: 11000

Logs stored: 1000

Logs discarded: 10000

=== MemAppender With PatternLayout Performance Test - (10000) ===

Before logging:

Used Memory: 14 MB (14883 KB)

Free Memory: 121 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 15 MB (16356 KB)

Free Memory: 120 MB

Total Memory: 136 MB

After logging:

Used Memory: 17 MB (18105 KB)

Free Memory: 118 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 4 ms

Logs processed: 20000

Logs stored: 10000

Logs discarded: 10000

=== MemAppender With PatternLayout Performance Test - (100000) ===

Before logging:

Used Memory: 17 MB (18105 KB)

Free Memory: 118 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 32 MB (33614 KB)

Free Memory: 103 MB

Total Memory: 136 MB

After logging:

Used Memory: 40 MB (41806 KB)

Free Memory: 95 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 26 ms

Logs processed: 150000

Logs stored: 100000

Logs discarded: 50000

=== MemAppender With PatternLayout Performance Test - (1000000) ===

Before logging:

Used Memory: 40 MB (41806 KB)

Free Memory: 95 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 164 MB (168795 KB)

Free Memory: 223 MB

Total Memory: 388 MB

After logging:

Used Memory: 249 MB (255301 KB)

Free Memory: 138 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 445 ms

Logs processed: 1500000

Logs stored: 1000000

Logs discarded: 500000

=== File Appender Performance Test - (1) ===

Before logging:

Used Memory: 157 MB (161534 KB)

Free Memory: 230 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 157 MB (161534 KB)

Free Memory: 230 MB

Total Memory: 388 MB

After logging:

Used Memory: 163 MB (167642 KB)

Free Memory: 224 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 34 ms

=== File Appender Performance Test - (10) ===

Before logging:

Used Memory: 163 MB (167642 KB)

Free Memory: 224 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 163 MB (167642 KB)

Free Memory: 224 MB

Total Memory: 388 MB

After logging:

Used Memory: 169 MB (173727 KB)

Free Memory: 218 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 16 ms

=== File Appender Performance Test - (100) ===

Before logging:

Used Memory: 169 MB (173727 KB)

Free Memory: 218 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 170 MB (174781 KB)

Free Memory: 217 MB

Total Memory: 388 MB

After logging:

Used Memory: 176 MB (180865 KB)

Free Memory: 211 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 10 ms

=== File Appender Performance Test - (1000) ===

Before logging:

Used Memory: 176 MB (180865 KB)

Free Memory: 211 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 176 MB (180865 KB)

Free Memory: 211 MB

Total Memory: 388 MB

After logging:

Used Memory: 183 MB (188123 KB)

Free Memory: 204 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 11 ms

=== File Appender Performance Test - (10000) ===

Before logging:

Used Memory: 183 MB (188123 KB)

Free Memory: 204 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 189 MB (194207 KB)

Free Memory: 198 MB

Total Memory: 388 MB

After logging:

Used Memory: 195 MB (200410 KB)

Free Memory: 192 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 18 ms

=== File Appender Performance Test - (100000) ===

Before logging:

Used Memory: 195 MB (200410 KB)

Free Memory: 192 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 195 MB (199860 KB)

Free Memory: 192 MB

Total Memory: 388 MB

After logging:

Used Memory: 225 MB (231410 KB)

Free Memory: 162 MB

Total Memory: 388 MB

Final stats:

Approximate test duration: 147 ms

=== File Appender Performance Test - (1000000) ===

Before logging:

Used Memory: 225 MB (231410 KB)

Free Memory: 162 MB

Total Memory: 388 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 217 MB (222312 KB)

Free Memory: 382 MB

Total Memory: 600 MB

After logging:

Used Memory: 309 MB (316592 KB)

Free Memory: 290 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 1616 ms

=== Console Appender Performance Test - (1) ===

Before logging:

Used Memory: 158 MB (162462 KB)

Free Memory: 441 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 158 MB (162462 KB)

Free Memory: 441 MB

Total Memory: 600 MB

After logging:

Used Memory: 170 MB (174727 KB)

Free Memory: 429 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 22 ms

=== Console Appender Performance Test - (10) ===

Before logging:

Used Memory: 170 MB (174727 KB)

Free Memory: 429 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 170 MB (174727 KB)

Free Memory: 429 MB

Total Memory: 600 MB

After logging:

Used Memory: 184 MB (189063 KB)

Free Memory: 415 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 41 ms

=== Console Appender Performance Test - (100) ===

Before logging:

Used Memory: 184 MB (189063 KB)

Free Memory: 415 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 184 MB (189063 KB)

Free Memory: 415 MB

Total Memory: 600 MB

After logging:

Used Memory: 196 MB (201351 KB)

Free Memory: 403 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 8 ms

=== Console Appender Performance Test - (1000) ===

Before logging:

Used Memory: 196 MB (201351 KB)

Free Memory: 403 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 196 MB (201351 KB)

Free Memory: 403 MB

Total Memory: 600 MB

After logging:

Used Memory: 210 MB (215687 KB)

Free Memory: 389 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 19 ms

=== Console Appender Performance Test - (10000) ===

Before logging:

Used Memory: 210 MB (215687 KB)

Free Memory: 389 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 222 MB (227975 KB)

Free Memory: 377 MB

Total Memory: 600 MB

After logging:

Used Memory: 234 MB (240263 KB)

Free Memory: 365 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 28 ms

=== Console Appender Performance Test - (100000) ===

Before logging:

Used Memory: 234 MB (240263 KB)

Free Memory: 365 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 354 MB (363143 KB)

Free Memory: 245 MB

Total Memory: 600 MB

After logging:

Used Memory: 158 MB (162449 KB)

Free Memory: 441 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 155 ms

=== Console Appender Performance Test - (1000000) ===

Before logging:

Used Memory: 158 MB (162449 KB)

Free Memory: 441 MB

Total Memory: 600 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 486 MB (498368 KB)

Free Memory: 113 MB

Total Memory: 600 MB

After logging:

Used Memory: 430 MB (441096 KB)

Free Memory: 169 MB

Total Memory: 600 MB

Final stats:

Approximate test duration: 1549 ms

Final stats:

Approximate test duration: 4351 ms

[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 19.628 s - in
appender.StressTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

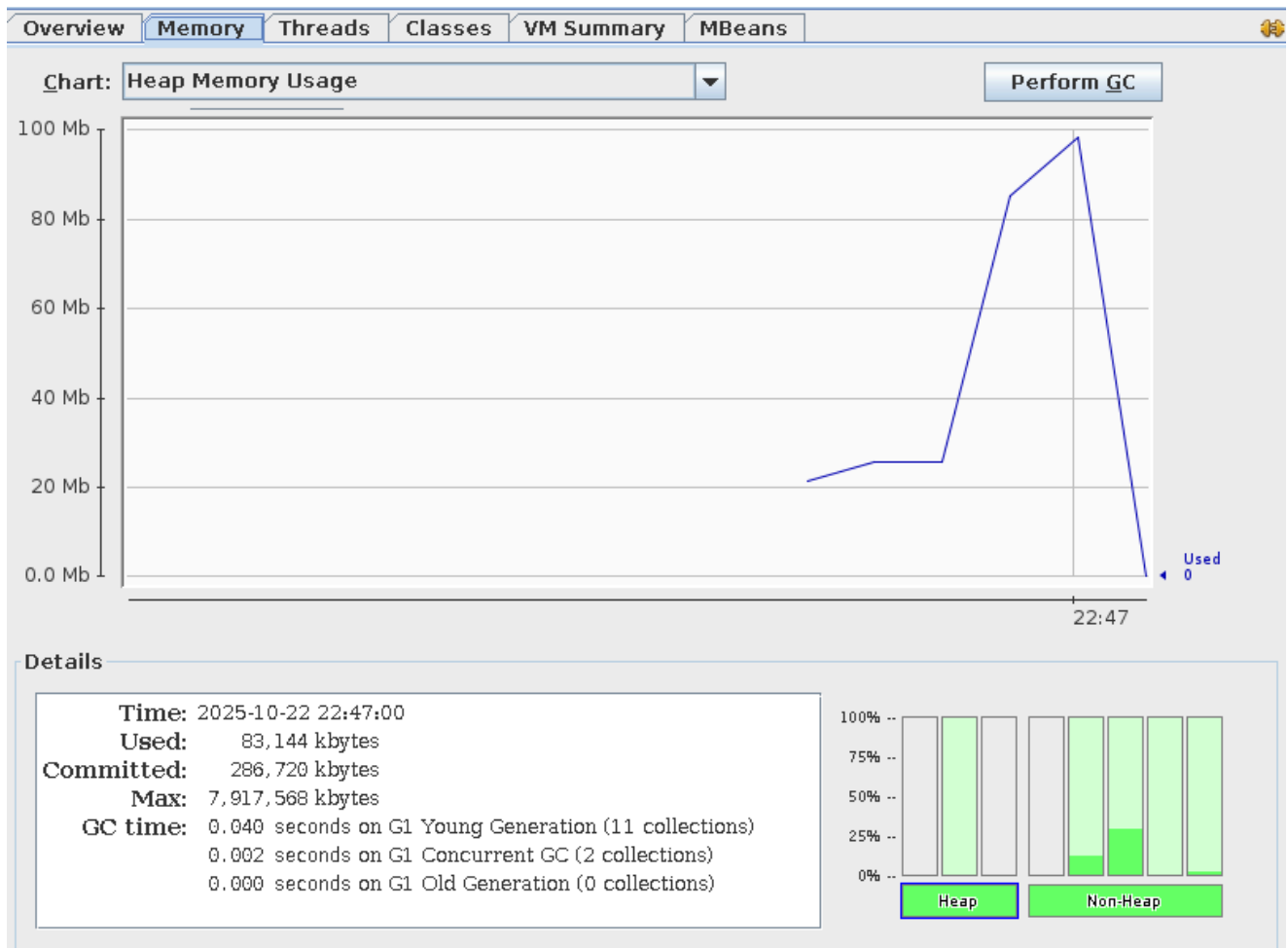
[INFO] -----

[INFO] Total time: 22.570 s

[INFO] Finished at: 2025-10-22T20:46:33+13:00

[INFO] -----

Velocity Layout



[INFO] -----

[INFO] T E S T S

[INFO] -----

[INFO] Running appender.StressTest

=== VelocityLayout Performance Test ===

=== MemAppender With VelocityLayout Performance Test - (1) ===

Before logging:

Used Memory: 12 MB (13168 KB)

Free Memory: 123 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 12 MB (13168 KB)

Free Memory: 123 MB

Total Memory: 136 MB

After logging:

Used Memory: 15 MB (15408 KB)

Free Memory: 120 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 11 ms

Logs processed: 10001

Logs stored: 1

Logs discarded: 10000

=== MemAppender With VelocityLayout Performance Test - (10) ===

Before logging:

Used Memory: 15 MB (15408 KB)

Free Memory: 120 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 15 MB (15408 KB)

Free Memory: 120 MB

Total Memory: 136 MB

After logging:

Used Memory: 16 MB (17230 KB)

Free Memory: 119 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 4 ms

Logs processed: 10010

Logs stored: 10

Logs discarded: 10000

=== MemAppender With VelocityLayout Performance Test - (100) ===

Before logging:

Used Memory: 16 MB (17230 KB)

Free Memory: 119 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 16 MB (17230 KB)

Free Memory: 119 MB

Total Memory: 136 MB

After logging:

Used Memory: 18 MB (18978 KB)

Free Memory: 117 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 5 ms

Logs processed: 10100

Logs stored: 100

Logs discarded: 10000

=== MemAppender With VelocityLayout Performance Test - (1000) ===

Before logging:

Used Memory: 18 MB (18978 KB)

Free Memory: 117 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 18 MB (18978 KB)

Free Memory: 117 MB

Total Memory: 136 MB

After logging:

Used Memory: 19 MB (20452 KB)

Free Memory: 116 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 2 ms

Logs processed: 11000

Logs stored: 1000

Logs discarded: 10000

=== MemAppender With VelocityLayout Performance Test - (10000) ===

Before logging:

Used Memory: 19 MB (20452 KB)

Free Memory: 116 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 21 MB (22200 KB)

Free Memory: 114 MB

Total Memory: 136 MB

After logging:

Used Memory: 23 MB (23674 KB)

Free Memory: 112 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 4 ms

Logs processed: 20000

Logs stored: 10000

Logs discarded: 10000

=== MemAppender With VelocityLayout Performance Test - (100000) ===

Before logging:

Used Memory: 23 MB (23674 KB)

Free Memory: 112 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 38 MB (39458 KB)

Free Memory: 97 MB

Total Memory: 136 MB

After logging:

Used Memory: 46 MB (47650 KB)

Free Memory: 89 MB

Total Memory: 136 MB

Final stats:

Approximate test duration: 19 ms

Logs processed: 150000

Logs stored: 100000

Logs discarded: 50000

=== MemAppender With VelocityLayout Performance Test - (1000000) ===

Before logging:

Used Memory: 46 MB (47650 KB)

Free Memory: 89 MB

Total Memory: 136 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 166 MB (170447 KB)

Free Memory: 233 MB

Total Memory: 400 MB

After logging:

Used Memory: 245 MB (251582 KB)

Free Memory: 154 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 445 ms

Logs processed: 1500000

Logs stored: 1000000

Logs discarded: 500000

=== File Appender Performance Test - (1) ===

Before logging:

Used Memory: 159 MB (163750 KB)

Free Memory: 240 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 159 MB (163750 KB)

Free Memory: 240 MB

Total Memory: 400 MB

After logging:

Used Memory: 175 MB (180032 KB)

Free Memory: 224 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 47 ms

=== File Appender Performance Test - (10) ===

Before logging:

Used Memory: 175 MB (180032 KB)

Free Memory: 224 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 175 MB (180032 KB)

Free Memory: 224 MB

Total Memory: 400 MB

After logging:

Used Memory: 190 MB (194587 KB)

Free Memory: 209 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 13 ms

=== File Appender Performance Test - (100) ===

Before logging:

Used Memory: 190 MB (194587 KB)

Free Memory: 209 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 190 MB (194587 KB)

Free Memory: 209 MB

Total Memory: 400 MB

After logging:

Used Memory: 203 MB (208704 KB)

Free Memory: 196 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 11 ms

=== File Appender Performance Test - (1000) ===

Before logging:

Used Memory: 203 MB (208704 KB)

Free Memory: 196 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 204 MB (209838 KB)

Free Memory: 195 MB

Total Memory: 400 MB

After logging:

Used Memory: 218 MB (223259 KB)

Free Memory: 181 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 13 ms

=== File Appender Performance Test - (10000) ===

Before logging:

Used Memory: 218 MB (223259 KB)

Free Memory: 181 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 161 MB (165598 KB)

Free Memory: 238 MB

Total Memory: 400 MB

After logging:

Used Memory: 175 MB (179504 KB)

Free Memory: 224 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 23 ms

=== File Appender Performance Test - (100000) ===

Before logging:

Used Memory: 175 MB (179504 KB)

Free Memory: 224 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 226 MB (232042 KB)

Free Memory: 173 MB

Total Memory: 400 MB

After logging:

Used Memory: 194 MB (199628 KB)

Free Memory: 205 MB

Total Memory: 400 MB

Final stats:

Approximate test duration: 171 ms

=== File Appender Performance Test - (1000000) ===

Before logging:

Used Memory: 194 MB (199628 KB)

Free Memory: 205 MB

Total Memory: 400 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 408 MB (418712 KB)

Free Memory: 791 MB

Total Memory: 1200 MB

After logging:

Used Memory: 488 MB (500630 KB)

Free Memory: 711 MB

Total Memory: 1200 MB

Final stats:

Approximate test duration: 2183 ms

=== Console Appender Performance Test - (1) ===

Before logging:

Used Memory: 160 MB (164766 KB)

Free Memory: 415 MB

Total Memory: 576 MB

Used Memory: 160 MB (164766 KB)

Inbetween logging (After MaxSize reached, before overflow):

Free Memory: 415 MB

Total Memory: 576 MB

Used Memory: 178 MB (183160 KB)

After logging:

Free Memory: 397 MB

Total Memory: 576 MB

Final stats:

Approximate test duration: 30 ms

=== Console Appender Performance Test - (10) ===

Before logging:

Used Memory: 178 MB (183160 KB)

Free Memory: 397 MB

Total Memory: 576 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 178 MB (183160 KB)

Free Memory: 397 MB

Total Memory: 576 MB

After logging:

Used Memory: 198 MB (203640 KB)

Free Memory: 377 MB

Total Memory: 576 MB

Final stats:

Approximate test duration: 21 ms

=== Console Appender Performance Test - (100) ===

Before logging:

Used Memory: 198 MB (203640 KB)

Free Memory: 377 MB

Total Memory: 576 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 198 MB (203640 KB)

Free Memory: 377 MB

Total Memory: 576 MB

After logging:

Used Memory: 218 MB (224120 KB)

Free Memory: 357 MB

Total Memory: 576 MB

Final stats:

Approximate test duration: 16 ms

=== Console Appender Performance Test - (1000) ===

Before logging:

Used Memory: 218 MB (224120 KB)

Free Memory: 357 MB

Total Memory: 576 MB

Used Memory: 220 MB (226168 KB)

Inbetween logging (After MaxSize reached, before overflow):

Free Memory: 355 MB

Total Memory: 576 MB

Used Memory: 238 MB (244600 KB)

After logging:

Free Memory: 337 MB

Total Memory: 576 MB

Final stats:

Approximate test duration: 12 ms

=== Console Appender Performance Test - (10000) ===

Before logging:

Used Memory: 238 MB (244600 KB)

Free Memory: 337 MB

Total Memory: 576 MB

Used Memory: 256 MB (263032 KB)

Inbetween logging (After MaxSize reached, before overflow):

Free Memory: 319 MB

Total Memory: 576 MB

Used Memory: 276 MB (283512 KB)

After logging:

Free Memory: 299 MB

Total Memory: 576 MB

Final stats:

Approximate test duration: 23 ms

=== Console Appender Performance Test - (100000) ===

Before logging:

Used Memory: 276 MB (283512 KB)

Free Memory: 299 MB

Total Memory: 576 MB

Used Memory: 184 MB (189315 KB)

Inbetween logging (After MaxSize reached, before overflow):

Free Memory: 391 MB

Total Memory: 576 MB

Used Memory: 276 MB (283523 KB)

After logging:

Free Memory: 299 MB

Total Memory: 576 MB

Final stats:

Approximate test duration: 127 ms

=== Console Appender Performance Test - (1000000) ===

Before logging:

Used Memory: 276 MB (283523 KB)

Free Memory: 299 MB

Total Memory: 576 MB

Inbetween logging (After MaxSize reached, before overflow):

Used Memory: 584 MB (598913 KB)

Free Memory: 471 MB

Total Memory: 1056 MB

After logging:

Used Memory: 270 MB (277377 KB)

Free Memory: 785 MB

Total Memory: 1056 MB

Final stats:

Approximate test duration: 1383 ms

Final stats:

Approximate test duration: 4742 ms

[INFO] Tests run:1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 19.973 s - in
appender.StressTest

[INFO]

[INFO] Results:

[INFO]

[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]

[INFO] -----

[INFO] BUILD SUCCESS

[INFO] -----

[INFO] Total time: 22.422 s

[INFO] Finished at: 2025-10-22T22:47:02+13:00

[INFO] -----