

Performance Analysis

The analysis compare the performance between MemAppender using a LinkedList, MemAppender using an ArrayList, ConsoleAppender and FileAppender - measure time and memory consumption by using VisualVM.

In the analysis, I use three different groups of maximum sizes. When it comes to test MemAppender, ConsoleAppender and FileAppender, we use VelocityLayout.

Here are the test results:

MemAppender using a LinkedList



MemAppender using an ArrayList



Through compare above two pictures, we can find:

When: maxsize \geq number of logs: Arraaylist is faster, and Linklist cover larger memory.

ConsoleAppender



FileAppender



Through compare above four pictures, we can find:

Run speed: FileAppender < Memappender < ConsoleAppender

Memory Occupied: File Appender > Console Appender > Memappender

PatternLayout



VelocityLayout



Through compare above two pictures, we can find:

Run speed: `PatternLayout` < `VelocityLayout`

Memory Occupied: `PatternLayout` > `VelocityLayout`