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The Large Hadron Collider (LHC) experiments produce a vast amount of data and its throughput is even increasing in time. Scalability is the main keyword and adding more hardware often solves the problem but is never the most cost efficient solution. Technology permitted us to build increasingly stronger CPUs and there are several tools that aid in understanding their utilization and suggest possible optimizations. The memory represents the main bottleneck since its bandwidth is limited and there are only few tools focusing on profiling memory efficiency. MemProf is a memory allocation profiling tool built on top of Valgrind, a very popular open source dynamic analysis framework, thereby taking benefit both from already existing components and high maintenance from its large number of contributors. Moreover, Valgrind's architecture permits the tool to access more fine-grained features such as support for multi-threaded programs and memory access tracking. The tool has been run over several standard Linux programs such as unzip, telnet, netstat, evince and is currently optimized for analysing larger applications. This paper presents the development process of this project, the current status and potential future extensions.

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