A graphical performance analysis and exploration tool for Linux perf

The Performance Monitoring Units (PMUs) implemented in modern computing architectures provide an opportunity to conduct non-intrusive performance measurements.

On a Linux system, the PMU units can be controlled by the `perf` tools. The pmu-tools toolkit is built around Linux perf tools which further enhances the usability of the Linux perf tools.

However, the current solutions lack visualization capabilities. The text-based interface for control and output diminishes the usability of the tools and the interpretability of the results.

Our project aims to provide a reliable and easy to use web-based graphical user interface on top of Linux perf.

We employ modern web technologies such as the Bokeh plotting engine in order to graphically display the performance results at the end of a benchmark or in real-time while the workload is running.

The web-interface we have developed allows remote access to the machine where the benchmarks are executed. Additionally it helps with the management of the results of the benchmarks by grouping them into sessions. With one click the results can be reloaded in the main page as well as archived or deleted.

Next steps include adding more advanced visualizations, improving backend robustness and enabling realtime feedback from the workload execution.