

# **xbat –An Easy-to-Use and Universally Applicable Benchmarking Automation Tool for HPC Software Within the Project hpc.bw (dtec.bw)**

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Benchmarking applications in high-performance computing (HPC) systems is essential for optimising runtime, reducing energy consumption, and ensuring efficient hardware utilisation. However, accessing and interpreting performance metrics can be challenging and error prone. To address this, we present xbat (extended benchmarking automation tool), developed by MEGWARE Computer Vertrieb und Service GmbH, as an easy-to-use and universally applicable tool to automate benchmarking and simplify performance analysis for HPC users of all skill levels.

This poster provides an overview of xbat's architecture, features, and case studies within the project hpc.bw (dtec.bw). We focus on the open-source molecular dynamics research software ls1 mardyn, which comes with an auto-tuning library AutoPas, and the closed-source mathematical optimisation package Gurobi.

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yes

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