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First Deployment of XCache for Workflow and Efficiency Optimizations on Opportunistic HPC Resources in Germany

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The efficient utilization of multi-purpose HPC resources for High Energy Physics applications is increasingly important, in particular with regard to the upcoming changes in the German HEP computing infrastructure. In preparation for the future, we are developing and testing an XRootD-based caching and buffering approach for workflow and efficiency optimizations to exploit the full potential of such resources despite the challenges and potential limitations associated with them.

With this contribution, we want to present a first prototype of our approach, deployed for optimizing the utilization of HoreKa, our local HPC cluster at KIT, that is opportunistically integrated into GridKa, the German Tier-1 center.

This includes first experiences and additional benefits for the operation of such sites that come with the additional monitoring capabilities of our setup.

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