

COKA is dead, long live COKA!

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COKA is a small HPC cluster, designed for codes prototyping and benchmarking, initially installed in 2015 at INFN Ferrara with a DP peak performance of about 100 TFLOP/s. Like the Voyager, it outlived its original mission and it has been continuously operational since almost ten years, but the original system is now being decommissioned to be replaced by newer heterogeneous compute nodes and a completely refactored software ecosystem.

Most of the compute power of this new system is given by 6 nodes based on the NVIDIA GraceHopper Superchip; then 4 more nodes equipped with 2 x IBM POWER9 plus 4 x NVIDIA v100 are available for educational activities; and an additional node is available for technology tracking, embedding an AMD GPU and multiple FPGAs.

This new system is designed to be used for theoretical physics and quantum simulations; analysis of cosmological experimental data concerning CMB; artificial intelligence workloads; as well as technology tracking, analysis and benchmarking of novel accelerators.

In this talk, after a brief introduction on the previous cluster infrastructure, we will focus on its newer hardware and software configuration.

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