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Enabling CMS Experiment to the utilization of multiple hardware architectures – a Power9 Testbed at CINECA

CMS software stack (CMSSW) is being built on a nightly basis for multiple hardware architectures and compilers, in order to benefit from the diverse platforms. In practice, still, only x86_64 is used in production, and is supported by design by the workload management tools in charge of production and analysis job delivery to the distributed computing infrastructure.
Profiting from an INFN grant at CINECA, a PRACE Center, tests have been carried on using IBM Power9 nodes from the Marconi100 HPC system. A first study on the modifications needed to the standard CMS WMS systems are shown, and very positive proof-of-concept tests have been conducted up to thousands of computing cores, also including an initial utilization of the GPUs which the nodes host. The current status of the tests, including plans to support multi-architecture workflows, are shown and discussed.

Significance

This is the first report on the CMS experiment trying to go fully multiarch, using a HPC center as a testbed

References

Speaker time zone

Compatible with Europe

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