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HPC Solutions for HEP applications at IHEP

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High Performance Computing (HPC) is playing a more important role to accelerate High Energy Physics (HEP) computing and scientific discovery. More HEP applications are willing to develop parallelism software to get much better performance. To help Physicists to get scientific output effectively, a Slurm cluster is constructed to provide HPC solutions for multiple applications including HEPS, BES, Lattice QCD, JUNO and etc. The Slurm cluster is consisted with heterogeneous resources including CPU and GPU cards, and MPI and GPU jobs are scheduled based on priority, fair share and resource limit regulations. The report presents the cluster status at the first beginning, later describes HPC solutions for the mentioned HEP applications in details including production system and supported systems, and the last part is about next steps in the near future.

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