

The design of Data Management System at HEPS

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According to the estimated data rates, we predict 24 PB raw experimental data will be produced per month from 14 beamlines at the first stage of High Energy Photon Source (HEPS), and the volume of experimental data will be even greater with the completion of over 90 beamlines at the second stage in the future. To make sure that huge amount of data collected at HEPS is accurate, available and accessible, an effective data management system (DMS) is crucial piece of deploying the IT systems. We design a DMS for HEPS which is responsible for automating the organization, transfer, storage, distribution and sharing of the data produced from experiments. First, the general situation of HEPS is introduced in this paper. Second, the architecture and data flow of the HEPS DMS are described from the perspective of facility users and IT, and the key techniques implemented in this system are introduced. Furthermore, the progress and the effect of the DMS deployed as a testbed at 1W1A of BSRF are shown.

Speaker release

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