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An Job Accounting tool for IHEP Computing

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The computing services running at computing center of IHEP support some HEP experiments and bio-medicine study. It provides 120,000 cpu cores including 3 local cluster and a Tier 2 grid site. A private cloud with 1000 cpu cores has been established to fit the experiment peak requirement. Besides, the computing center has several remote clusters as its distributing computing sub-site. Torque and HTCondor are two schedulers to manage clusters and there are more than 500,000 jobs running at computing cetner of IHEP each day.
We design and develop a Job Accounting tool to collect all the job information from clusters, clouds and remote sub-sites. The tool gives a fine-grained statistics for both users and system managers in time. Both jobs status and cpu cores utility can be accounted and showed in any time period. Since the amount of the jobs information grows fast day by day, MySQL cluster with optimization is chosen as the job database to provide quick query. As a serial of standard APIs are defined to collect job information, response job info query,it is easy to provide accounting service to new cluster. A web portal is developed as the user interface to accept on-line job query and to show the statistics in HTML5 graph.

Tertiary Keyword (Optional)

Secondary Keyword (Optional)

Primary Keyword (Mandatory)

Accounting and information

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