

A massive BES job submit and management tool

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The operation of the BESIII experiment started on July, 2008. More than 5 PB data will be produced in the coming 5 years. To increase the efficiency of data analysis and simulation, it is necessary sometimes for the physicists to cut a long job into a certain number of small jobs and execute in a distributed mode. A tool is developed for the BESIII job submission and management. With the tool, a large BES job will be split into a series of sub-jobs which can be processed in parallel. Client / Server architecture is used in the tool. Two kinds of job client, namely web and command line interfaces, are provided for the job operations. To implement the tool system, the web services running on several job servers are used to manage the jobs and accept jobs from the job clients. A set of load balance policy is assigned among the job servers. A Database is used to keep the information of submitted jobs and to provide the information for the BES dataset. Jobs could be submitted to the different computing back-ends of local batch system as well as grid system according to the user's request. Job result checking and re-submission functions are provided in case of job failures.

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