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AliEn Extreme JobBrokering

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The AliEn workload management system is based on a central job queue which holds all tasks that have to be executed. The job brokering model itself is based on pilot jobs: the system submits generic pilots to the computing centres batch gateways, and the assignment of a real job is done only when the pilot wakes up on the worker node. The model facilitates

a flexible fair share user job distribution. This job model has proven stable and reliable over the past years and has survived well the first two years of LHC operation with very little changes.

Nonetheless there are several areas where the model can be pushed to the next level: most notably in the area of 'just in time' job and data assignment, where the decisions will be based on data closeness (relaxed locality) and the data which already has been processed. This methods

will have significant efficiency enhancement effect for end user analysis tasks.

Student? Enter 'yes'. See <http://goo.gl/MVv53>

no

Summary

This contribution will describe the new mechanism implemented in AliEn for the job splitting and matchmaking. It will also show how the users benefit from such a model.

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