

Improving the Scheduling Efficiency of a Global Multi-core HTCondor Pool in CMS

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Scheduling multi-core workflows in a global HTCondor pool is a multi-dimensional problem whose solution depends on the requirements of the job payloads, the characteristics of available resources, and the boundary conditions such as fair share and prioritization imposed on the job matching to resources. Within the context of a dedicated task force, CMS has increased significantly the scheduling efficiency of workflows in reusable multi-core pilots by various improvements to the limitations of the glideinWMS pilots, accuracy of resource requests, efficiency and speed of the HTCondor infrastructure, and job matching algorithms.

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