Belle Monte Carlo Production on the Australian National Grid

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In 2004 the Belle Experimental Collaboration reached a critical stage in their computing requirements. Due to an increased rate of data collection an extremely large amount of simulated (Monte Carlo) data was required to correctly analyse and understand the experimental data. The resulting simulation effort consumed more CPU power than was readily available to the experiment at the host institution, KEK, Japan. In order to meet requirements the simulated data production was distributed to remote institutions who were able to contribute CPU power. The Australian Belle collaborators participated in this production successfully utilising resources at number of Australian facilities, including APAC (Australian Partnership for Advanced Computing), AC3 (Australian Centre for Advanced Computing and Communication), MARCC (Melbourne Advanced Research Computing Centre), and VPAC (Victorian Partnership for Advanced Computing). This production involved the use of a globally accessible data catalogue and resource management system, SRB (Storage Resource Broker), and tools developed in-house for the central dispatch, monitoring and management of jobs. The production was successfully deployed on the Australian APAC National Grid (APAC NG) infrastructure and is currently utilising the LHC Computing Grid middleware layer.

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