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ScotGrid: Providing an Effective Distributed Tier-2 in the LHC Era

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ScotGrid is a distributed Tier-2 centre in the UK with sites in Durham, Edinburgh and Glasgow. ScotGrid has undergone a huge expansion in hardware in anticipation of the LHC and now provides more than 4MSI2K and 500TB to the LHC VOs.

Scaling up to this level of provision has brought many challenges to the Tier-2 and we show in this paper how we have adopted new methods of organising the centres, from fabric management and monitoring to remote management of sites to management and operational procedures, to meet these challenges.

We describe how we have coped with different operational models at the sites, where Glagsow and Durham sites are managed "in house" but resources at Edinburgh are managed as a central university resource. This required the adoption of a different fabric management model at Edinburgh and a special engagement with the cluster managers. Challenges arose from the different job models of local and grid submission that required special attention to resolve.

We show how ScotGrid has successfully provided an infrastructure for ATLAS and LHCb monte carlo production.

Special attention has been paid to ensuring that user analysis functions efficiently, which has required optimisation of local storage and networking to cope with the demands of user analysis.

Finally, although these Tier-2 resources are pledged to the whole VO, we have established close links with our local physics user communities as being the best way to ensure that the Tier-2 functions effectively as a part of the LHC grid computing framework.

Presentation type (oral | poster)

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