



THE WHITE ROSE GRID e-Science Centre

A key member of the
White Rose Grid family.



The White Rose Grid at

THE UNIVERSITY *of* York

Introduction

The White Rose Grid is very active at York, in terms of facilities, research, and business outreach activities.

Facilities

York's facilities are in the process of being upgraded at the moment.

Currently the services comprise:

- A log in service (pascal.wrg.york.ac.uk)
- A batch service
- A facility for hosting web services
- An Access Grid video conferencing service.
- An e-Science digital certificate issuing service.

These services are currently backed by a 24 node cluster from Streamline with a total of 112 AMD Opteron processor cores, linked via Infiniband HTE networking, and an additional two SunFire V40Zs with a total of 16 AMD Opteron cores linked in by standard Infiniband.

Storage is provided by a cluster from OCF of IBM disks running the GPFS parallel file system providing 8TB of first line storage. The file servers for this are linked directly to the compute nodes via Infiniband, giving excellent data speeds. Tape backup is provided.

Research

There are several strong grid-related projects based at York, or with strong York components, including:

- BROADEN, a collaboration with Sheffield, Leeds, Oxford and Rolls-Royce to improve maintenance performance for aero engines
- GRIDweld, a project to process medical imaging data, in collaboration with the Hull York Medical School
- CypherGRID

In addition many groups use the high performance computing facilities in their research, for example:

- Proteomics
- Surface geometry optimisation of rare-earth silicides
- Structural polymorph searches using a genetic algorithm
- Shape matching of molecules for drug design.

Business Outreach

York strongly believes in leveraging the White Rose Grid brand to provide benefit for local industry and to provide potential revenue streams via knowledge transfer.

York Science park also houses some innovative companies with interests in grid technologies, for example Vita Nuova.

Future Developments

Beyond the current system upgrade we hope to implement best practices to make the White Rose Grid at York a better user experience, and promote best use of resources across campus within a grid paradigm.

We also anticipate some flagship projects using the grid in the future, for example:

- York Centre for Atmosphere-Biosphere Exchange
- The York Neuro Imaging Centre

Further Information

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