



THE WHITE ROSE GRID e-Science Centre of Excellence

The UK National Grid Service Node at the University of Leeds



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Introduction

Since September 2004 the National Grid Service (NGS) offers a full production service for the UK academic research community. This service has been funded by the Joint Information Systems Committee for Support of Research (JCSR), and the Council for the Central Laboratory of the Research Councils (CCLRC). At the same time the Grid Operations Support Centre (GOSC) was created with backing from the UK e-Science Core Programme [1] funded by both the Office of Science and Technology (OST) and the Department of Trade and Industry (DTI) and

managed by the Engineering and Physical Science Research Council (EPSRC) on behalf of all the Research Councils.

About NGS and GOSC

The NGS [2] offers access to a coherent collection of compute and data resources as well as data management tools and software development

environments supporting collaborative computing across the UK.

The NGS service and its associated GOSC [3] underpin a broad variety of UK e-Research and form a fundamental part of the UK e-Infrastructure; they play an instrumental role in ensuring UK leadership internationally.

NGS Resources

Today the NGS offers significant heterogeneous computational and data resources for e-Research. At the core of this free service for UK academia there are four nodes. These facilities are hosted and operated by the White Rose Grid (WRG) [4] at the University of Leeds, CCLRC-RAL, and Universities of Oxford and Manchester. In addition to these core GOSC sites, the UK national high performance computing (HPC) services, CSAR and HPC-x, are also partners in the NGS. The service is extended further through facilities offered by the Universities of Cardiff, Bristol, Lancaster and Westminster (refer to Figure 1). Moreover, further institutions are currently in the process of joining the NGS and are to be partners or affiliates in this UK collaborative e-Infrastructure offering the production grid service.



Figure 1: NGS partnership





Access to NGS

Access to NGS resources is through grid middleware, which is based on the Globus Toolkit, and includes Storage Resource Broker, OGSA-DAI and interfaces to the Oracle database.

NGS facilities are freely available to UK academic researchers. Registration is available through a web interface [5]. All projects and users requesting NGS resources are approved through a light-weight peer-review process.

Phase 2

Building on the success of the current NGS, the NGS-2 service due later this year will enable researchers to take full advantage of the grid to enhance national and international e-Research and collaborations.

With over 300 registered users with projects from broad and diverse subject areas as well as with the growing number of partners providing further resources, the NGS is in a strong position and is looking confidently towards the future.

More about NGS

The NGS web site [2] contains comprehensive information about this service; more details on the supported e-Infrastructure are available from the GOSC web site [3].

The training team from the National e-Science Centre (NeSC) offers courses on NGS use as well as on other aspects of effective use of e-Science technologies and

e-Infrastructure in many fields of research [6].

Help and Support

For assistance with issues regarding access to and use of the NGS node at Leeds, or getting a digital certificate, or should you wish to talk to a local expert please contact the University of Leeds ISS Helpdesk (helpdesk@leeds.ac.uk or telephone 0113 343 3333).

Other enquiries, in particular those regarding other nodes of NGS, should be directed to the Grid Operations Support Centre Helpdesk (email: support@grid-support.ac.uk; tel: 01235 446822).

Further Information

Contact:

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The project web sites:

<http://www.ngs.ac.uk>

References

- [1] <http://www.rcuk.ac.uk/escience/>
- [2] <http://www.ngs.ac.uk/>
- [3] <http://www.grid-support.ac.uk/>
- [4] <http://www.wrgrid.org.uk/>
- [5] <http://www.ngs.ac.uk/access.html>
- [6] <http://www.nesc.ac.uk/training/>



Figure 2: The NGS node hosted at the University of Leeds



The University of Sheffield.



THE UNIVERSITY of York

